The Builder.

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ILLUSTRATIONS.

Ancient Cathedrals of Ireland: III., St. Canice, Kilkenny.—Drawn by Roland W. Paul ..... *Double-Page Ink-Photo.*
Plan, Cathedral of St. Canice, Kilkenny.—Drawn by J. C. Heriot ..... *Double-Page Photo-Litho.*
Decorative Painting: "Victor Hugo Offrant Sa Lyre à La Ville De Paris."—By M. Puvis de Chavannes ..... *Double-Page Ink-Photo.*
Decorative Painting: "Triomphe de L'Art."—By L. Bonnat ..... *Double-Page Ink-Photo.*

Blocks in Text.

Interior of West Window, Kilkenny Cathedral ..... Page 426
Font, Kilkenny Cathedral ..... Page 427

CONTENTS.

h Art in 1894 417
ever Hospitals' Competition 419
..... 420
Institute of British Architects 422
rchitectural Association 423
ny Cathedral 426
tive Paintings for the Hôtel de Ville, Paris 427
London County Council 428
etitions 429
The Heating and Ventilation of the Houses of Parliament 429
Wrought Iron Gates, Carshalton Park 430
"Sewer and Drain Ventilation" 430
The Architectural Room at the Royal Academy 430
Student's Column: The Structure and Physical Properties of Building Stones.—XXII. 430
General Building News 431
Sanitary and Engineering News 432
Stained Glass and Decoration 432
Foreign and Colonial 432
Miscellaneous 432
Legal 433
Capital and Labour 433
Meetings 433
Recent Patents 433
Some Recent Sales of Property 434
Prices Current of Materials 434
Tenders 434

French Art in 1894.

THE aspect of the two great Paris exhibitions this year certainly goes to confirm the opinion that has been more than once expressed in our columns as to bad effect of the division of the nch painters into two rival camps. say the painters more especially, use in fact the schism hardly seems to ct the sculptors and architects, nearly all whom continue to send their works to old Salon. In the Champ de Mars Salon small collection of sculpture only includes or three works of real interest—some orative work by M. Injalbert, a pathetic dy by M. Saint-Marceaux ("La Faute"), "Le Sommeil de Leda" of M. Mulot—work to drive the "British Matron" to nzy; and in architecture there is hardly thing that can be said to be of interest, we except a model by M. Henri Chaine a new form of iron roof for domes. It in the matter of painting that the two ons are divided mainly, and the results manifestly unfavourable to both exhibi-ns. There can be no doubt that the exhi-ion at the old Salon is much below the rage, when taken as a whole. It contains course a good many fine works, but the pro-rtion of poor and uninteresting pictures ich are hung is certainly on the increase, immense range of galleries being filled as as usual, with the loss of that proportion fine works which is to be found in the Salon, and which would otherwise upy part of the space at the Champs ysées now occupied by inferior works. the other hand it cannot be ques-ed that the Champ de Mars Salon is going down deplorably. During first years, when there was a nger *esprit de corps* operating in its vour among those who had rebelled inst the old Salon, it contained a ge proportion of fine works mingled h a considerable amount of mere eccen-city; but now the eccentricity is getting upper hand, and the long walls of its ncipal galleries are

"Thin sown with aught of profit or delight,"

diversified not seldom with things which simply hideous. All this is melancholy to and things are not likely to improve as as this effort to keep up two rival Salons is persisted in. Wonderful as is the energy and vitality of her artists, Paris cannot support two annual exhibitions on such a scale as these, and the sooner this fact is admitted and acted on the better.

Decorative painting on a great scale occupies a considerable place at the old Salon, and at the new Salon the work which mainly redeems the exhibition from mere mediocrity is the very large painting by M. Puvis de Chavannes intended to decorate the ceiling of the "Escalier du Préfet" at the Paris Hôtel de Ville. We publish a lithograph of the centre or flat portion of this, the subject of which is "Victor Hugo Offering his Lyre to the City of Paris," and we give also an illustration of the ceiling painting by M. Bonnat, "The Triumph of Art," exhibited at the old Salon, and intended also for the Hôtel de Ville, for the room called the "Salon à Arcades," but otherwise known as the "Salon des Arts." The two works are rather typical of the respective tendencies of the two exhibitions, as illustrated in their best aspect. At the old Salon the ideal of the easel-picture prevails; the style of picture which is painted more or less realistically and worked up with strong effects of light and shadow and a liberal scale of colour: at the new Salon the favoured style is that which appertains rather to fresco painting, with a comparatively flat treatment and a low scale of colour. In M. Bonnat's picture the energy is somewhat overdone both in regard to design and colour; the horse is too ostentatiously rampant, and his cream-white shape is relieved against the dark purple shadows on the clouds in a manner which is forcible enough, no doubt, but somewhat too *prononcé* for decorative painting. In fact, the whole thing is a great easel picture transferred to a ceiling. Only in one sense, as a matter of design, is it better suited for a ceiling position than the painting of M. Puvis de Chavannes, in that there is a more floating movement about it, and it could accordingly be seen from different positions below without suggesting that difficulty about the "right way up" which is the great drawback of ceiling paintings. In M. Puvis de Chavannes' far more calmly composed and really decorative work, this difficulty about the "right way up" is frankly ignored; the figures stand on the ground in the ordinary manner, and consequently from one side of the room the whole thing must be seen entirely the wrong way up. This is the first time, we believe, that M. de Chavannes has been induced to meddle with a ceiling painting; his experiences have hitherto been on vertical walls; and just as in point of *style* M. Bonnat's work is an easel picture misplaced as a decorative picture, so in point of *design* M. de Chavannes' painting, perfectly decorative in style, is a wall decoration transferred to a ceiling, and will always, we fear, produce that impression. The decorations of the large cove which supports this central flat portion of the ceiling are equally admirable in decorative style, and have the additional merit of falling into the right place as design; they consist of four groups symbolising "Patriotisme," "Charité," "Ardeur Artistique," and "Foyer Intellectual," filling four spandrels; and groups symbolising "Esprit," "Fantaisie," "Beauté," "Intrepidité," "Culte du Souvenir," and "Urbanité," occupying six tympana in the heads of arches. These subsidiary subjects are full of grace and fancy.

The old Salon contains some very large works in decorative painting, besides that of M. Bonnat. Of these the most important is M. Fournier's immense canvas, "Les Gloires Lyonnaises," intended for the general council room of the Hôtel de Préfecture at Lyons. It is a collection of portrait figures of eminent natives of Lyons. The modern men, including Meissonier, Ampére, and many other well-known names, are grouped in the foreground, which includes the men of this century, the earlier figures being on the left, the portrait of Marshal Suchet on the left forming a kind of appropriate balance to that of Meissonier on the right. The Mediæval and still earlier figures complete the circle in the middle of the picture, Marcus Aurelius forming the centre figure. The composition is flanked by a Classic order on each side, the whole height of the picture, which forms a frame to the view of the Gulf of Lyons in the background. A key to the portraits is given beneath. The picture attracts much attention, and may be considered a great success, as it combines the interest of portraiture with a really fine total effect. The various kinds of subjects which may be decoratively treated are shown in other works with rather amusing variety. "La Couronne de Toulouse," by M. Debat-Ponsan, a ceiling for the Hotel de Ville at Toulouse, is one of the true class of ceiling paintings, in which the figures float rather than stand; it consists of a collection of figures, nude or brightly draped, symbolising the various arts, and is an excellent example of its class, as it is a kind of composition exactly suited to a ceiling, and which, in fact, looks out of place when hung, as it is at present, on a vertical wall. M. Léon Comerre's "La Rhône et la Saône," a decorative picture for the Préfecture of the Rhône, is one of the old classic school, in which the Rhône, a bearded Neptune-like

figure, is seated on rocks, and the Saône appears as a female figure floating down on the stream to the junction of the two rivers. The canvas is not very well filled up, and the colour is cold. Mr. Bridgmann exhibits, for the first time we believe, a large decorative work of fine design and sentiment, "La Musique du Passé," called "Panneau Décoratif pour un Hôtel," in which a group of Greek-looking figures are listening to Egyptian harp-players, a treatment which enables the artist to turn to account his exceptional knowledge of Egyptian costume and detail. In a decorative sense the picture may be considered a very fine one. M. Berteaux exhibits a work on a smaller scale, "Paris en Fête, 1893 (France et Russie)", intended for the Galerie Lobau at the Hôtel de Ville, and which is a clever attempt to produce a decorative effect from the treatment of a crowd of boys in half light, flying Chinese lanterns; it seems hardly serious enough for a permanent decoration in a public building. Another variation in decorative subjects is M. Escalier's "Galanterie: panneau décoratif," a palace garden scene with balustrades and trees and a part of a building in the background, with two or three foreground figures; the artist has succeeded in producing a decorative effect without entirely losing the feeling of landscape. The largest of all the decorative works exhibited is "Venite ad me omnes," a religious painting by M. Monchablon, a pupil of Gleyre; it is not a "Christus Consolator," however, as the title would imply, but an apocalyptic picture treated in a very flat style and somewhat like a huge illumination, representing Christ enthroned in the centre, the elders and the evangelistic symbols grouped around, and the seven churches as very beautiful kneeling figures in the foreground, each holding a model of a church; by a very pretty artifice, in order to group these seven figures symmetrically, the artist has represented one of the figures as rising up towards the throne in a kind of ecstacy, holding up the model on high, so that the other six form a kneeling group of three on each side of the centre. This is ecclesiastical art, with the limitations implied by that adjective, but it is a fine example of its kind.

It is in the old Salon more especially that we find the majority of that class of pictures which depict incidents merely, and too many of which, like M. Le Dru's "Episode du Siége du Lille," arouse only a curiosity as to what is the point of the story represented, and when one has ascertained that, most of the interest of the picture has evaporated, except where the subject has been treated with a force which gives it a dramatic interest for its own sake. M. Detaille exhibits a huge "incident" picture, "Les Victimes du Devoir," a scene during a fire at night in the streets of Paris, where some firemen who have been killed in the execution of their duty are carried through the crowd. This picture is obviously very popular, but we do not think many artists will think it worth the space it occupies, or the result commensurate with the ability displayed in its execution. There are a certain number of Napoleonic pictures; the well-known interview between Napoleon and the Pope, when the former went into a a piece of acted diplomatic passion, and the Pope addressed him sarcastically as "Farceur!" finds an illustrator in both Salons; in neither case with much success. But a small picture of this class really worth attention is M. Kratké's "Campagne de France, 1814," a cottage interior into which Napoleon has stepped *en route* to warm his feet at the fire, two or three officers standing respectfully by the door, while through the window are seen the rows of figures of the soldiers pressing on their march, bending forward in the action of walking laboriously through the snow. The charm of this small picture is its absolute reality; it is like a day of the campaign brought back to one. Mdme. Demont-Breton has an interesting study of a bit of old Dunkerque life in her picture of "Jean Bart" (in 1674) persuading the fishermen to enrol themselves; also a painting in which the charm lies not in pictorial effect so much as in the air of reality imparted to it, and which is just what is so often wanting in this class of historic pictures.

The old Salon is not wanting, however, in some fine figure paintings of the ideal order. M. Gervais' "Jugement de Paris" can perhaps hardly be called in one sense an ideal treatment of the legend, for the goddesses are very like modern ladies, but there is a kind of poetic glamour about the whole scene, arising mainly from the rather unreal and yet very rich and beautiful colouring, and altogether it is a remarkable work, if not rising to the height of its subject. The degree of poetic feeling which may be imparted to a nude study is finely shown by M. Raphael Collin in his "Eveil," a kind of dream nymph who has just risen from the ground and is stretching her arms as just awakened; the colouring both of the figure and of the foliage which forms its background is kept back, as it were, from the plane of realism; the whole forms a harmony of colour which is unlike nature and yet seems all in keeping with the general ideal of the painting. It is interesting to contrast with this such a picture as Mdme. Caire's "Fumeuse," a woman reclined on a rug with her back to the spectator, smoking a cigarette; a picture vulgar in idea and yet redeemed from vulgarity by its splendid broad execution; real flesh and blood on canvas; in this again how different to M. Wencker's staring and hard "Nymphe Chasseresse;" neither the beauty of ideal or of execution. M. Bouguereau is as pretty, as finished, and as academically correct as usual in his "La Perle," a life-size nude figure kneeling and as if emerging from a gigantic shell; the title of the picture giving the excuse for the pearl-like flesh tints. Pretty and nothing more, however, is the word for this; it professes a sentiment, but it is sentiment of the weakest order, and on the whole one prefers a mere nude study in a more powerful though realistic style, such as Mdme. Caire's just mentioned, which makes no false appeal to sentiment.

Among other paintings of ideals is a rather fine one by M. Berthault, "Réveil," a floating figure rising from shadow to light, grouping with a second one blowing the trumpet of Dawn. M. Henri Martin, who used to be one of the most remarkable contributors of pictures with a meaning or allegory, seems to have rather lost his energy and has gone into single-figure studies with effects of light, like his "Douleur," a heavily draped and veiled figure going through a wood with a lantern; a picture which certainly does not represent the best which its author has done or might do.

Hospital pictures and surgical operations seem to have at last palled, though in place of them M. Harris, an American-born artist residing in Paris, who seems to have imbibed the taste of the Paris picture-gallery crowd for horrors, gives us a very large painting of "La Loi d'Honneur," in which a wronged husband has shot a man whom he has surprised with his wife under circumstances leaving no room for explanation, while the wife is trying to hide behind the dressing-table. Anything more vulgar and blatant than this large picture, in the artistic and in every other sense, one could not conceive; but it receives the homage of much attention. A more healthful departure in realistic painting seems to be a taste for workshop scenes, two or three of which are very well and thoroughly executed, though mostly totally wanting in what may be called pictorial value; they are simply clever transcripts. One of these labour pictures, "Une Forge," by M. F. Cormon, shows rather more of artistic power, and this has been purchased by a patriotic Government.

It is exceedingly difficult to form an estimate from the Salon pictures of the real vitality of French landscape at present, because landscape paintings, which are mostly on a scale of moderate size, get so completely overborne and crushed by the crowd of large and more or less violent painted figure and *genre* pictures amid which they have to find place. One can form some estimate as to this by comparing the effect of Mr. Brett's "Pearly Summer," which is hung at the Salon, with the recollection of its effect on the walls of the Academy, where it appeared as a large picture with a powerful effect of sunshine; here it seems quite a small picture, and the sunshine seems half crushed out of it.* It is well hung, however, and is balanced by one of the best French landscape pieces in the galleries—M. Max Bouvet's "Lever de Lune." One is led to think, however, from this example, that a good many of the landscapes in the Salon which impress one as rather of second-class interest, would produce a very different effect in other surroundings. They would certainly have a much better chance of showing at their best if two or three of the galleries were devoted especially to landscape, apart from the figure paintings. One thing which strikes one in the landscapes of the year is that there is less of that cold, grey, sunless style of representing Nature which was so prevalent recently; some sunshine has come into French landscape, and we find various brightly-painted scenes, such as M. Bourgeois' "Chemin de la Fresnaye," M. Carl Rosa's "En Novembre," a Seine picture in which the foreground bank is perfectly rendered, M. Dupré's "Une Prairie à Archelles," M. Grivolas' "Les Roches Fleuries," a brilliant riot of wild roses and sunlight, M. F. E. Michel's "En Forêt," a fine study of forest foreground; M. Mosler's "Sous les Pommiers," an orchard scene with a girl standing under the shade of a large tree, which, simple as the subject is, has the merit of real pictorial character. The new Salon contains still better examples in such works as M. Courtens' "Sortie du Troupeau," Mdme. Lemaire's "Derniers Beaux Jours," and M. Eliot's "Le Soleil dans les Arbres," which does justice to its title. On the other hand, we find paintings such as M. Dendy's "Le Ciel Bleu dans le Bois," in which the sky is like blue paint, but not like atmosphere, or M. Fath's "Un Sentier sous Bois en Mai," which is all paint and nothing else. The want that we find is the want of what may be called the sentiment of landscape; M. Moteley's "Prairie dans la Vallée de Clécy" is one exception; this is a real landscape with something Turneresque about it; but this "Turneresque" quality is rarely seen in French landscape, and the works which have most force and individuality generally have least of it. M. Quignon's "Blés en Fleurs," for instance, is a masterly painting as a carefully-studied representation of natural fact, and in that sense one of the most "thorough" landscapes in the galleries; but there it seems to stop. We find more of the sentiment of landscape in some of the small works in the new Salon, those of M. Iwill and M. Jeanes, for instance; not very powerful works in point of execution, but they are redeemed by a certain feeling which is wanting in the larger and more ambitious landscapes of the old Salon. As to sea painting, with few exceptions our neighbours are no nearer to it than ever; Britannia still rules the waves in that sense at all events. The majority of the sea pieces, at least representations of rough sea, in both Salons are dead failures; some of them are quite absurd, and seem as if painted from description by people who had never seen the sea. Mr. Henry Moore's picture in the new Salon is enough in itself to throw the whole of the rest into the shade. M. La Villette's "Marée montante à Quiberon" is an exception; that is a good sea; and so is that of Mr. Robinson's, in which "Une Nymphe de la Mer" bathes her feet, but here the painter is an Englishman.

* Mr. H. W. B. Davis's exquisite little painting, which was the second room at the Academy last year, seems to be killed in the company in which it is hung in the new Salon: but for recognising it, we should have passed it over.

those natural perception of the sea has not apparently been dulled by Paris training. In the treatment of calm sea there are some fine and luminous works, such as M. Duthoit's "Angelus en Mer," and several pictures commemorating the arrival and departure of the Russian fleet are very good examples of maritime subjects. As long as the sea is calm, in fact, our neighbours can make something of it; it is when it gets rough that it appears to be too much for them.

Portraiture is not very strong this year in either Salon; there are some very good examples in the old Salon, but none that remains in the memory as a really remarkable work; and in the new Salon M. Carolus-Duran is either quiescent, and has none of his imposing full-length portraits this year, only some bust likenesses, of which "Mdme. B——" is the finest. It is of some interest to notice, however, that this painter is showing symptoms of taking to other subjects than portraiture, and exhibits a sketch for a crucifixion scene, and a couple of landscape studies. We presume the "advanced" school of critics will tell us that Mr. Whistler's portrait of the Comte de Montesquiou-Fézensac is the portrait of the year. We can only see a figure about ten heads high, with a colourless pasty face, which nothing but absolute infatuation could accept as a fine picture. Among other artists who represent the new Salon tendencies, M. Dagnan-Bouveret sends several good portraits, though he is hardly at his best. M. Aublet's charmingly-finished fantasy entitled "Au Matin" is somewhat superficial and conventional, but exquisitely complete in its way. M. Besnard rather takes the hand out of the hand of Carolus-Duran by his brilliant "Portrait of Mdme. B——," in orange silk with a blue marble mantelpiece forming part of the background, but kept very subdued in colour; conveying the effect of the colour in shadow rather than the colour itself; a fine and harmonious work in spite of its bold colour-scheme. M. Bénud, whose style belongs much more to the old than the new Salon, is overworking his invention of bringing the figure of Christ into contact with subjects of modern life; the effect was striking at first, but has become hackneyed and rather stagey now. M. Mathey's portraits, and those of M. Cervex, and his nude study "Le Bain," are fine; and one more decorative painting may be mentioned, a scene in Paris in 1258, by M. Delance, representing the syndics of corporations attending before Étienne Boileau to assist in the getting up of the "livre des métiers;" this is hardly decorative except in the sense that it is flatly treated, but it is interesting as an evidently conscientious attempt to realise the men of the thirteenth century as they actually may have been, in physiognomy and costume.

Sculpture exhibits at the old Salon are as numerous as usual, and include a good many good works, but sculpture also is not equal in interest to the collections of some previous years. M. Mercié does not exhibit, M. Falguière only exhibits a bust; and instead of one of his fine ideal figures facing the main entrance as usual, we have M. Frémiet's portrait figure of Meissonier, in tight trousers and top-boots; clever and characteristic enough, but certainly not sculpturesquely beautiful. There are, however, few of the eccentric and grotesque experiments which sometimes form blots on the sculpture collection; the standard of taste and effort is high, and there are some figures and groups of great beauty and purity of style, such as M. Demaille's "Amour" (the property of the Corporation of Paris); M. Dubois' fine group "Le Pardon," which has been purchased by the State; M. Hannaux' recumbent figure of "Orphée"; M. Lemaire's beautiful seated memorial statue of "Princesse Marie d'Orléans"; M. Louvier's "La Victoire," a monument to commemorate the centenary of the raising of the siege of Dunkerque; M. L. Morice's bas-relief figures representing "Music" and "Painting"; M. Pézieux' charming figure of "L'Écho Enchanteur" (purchased by the State), M. Puech's "La Seine," also purchased by the State (happy sculptors who live under so recognisant a Government!), a recumbent figure with a bas-relief of the City of Paris in the background; and M. Charpentier's charming bronze figure "Les Adieux d'une Hirondelle," in which the female figure symbolises the swallow. Patriotic monuments are not wanting; M. Carlès' "Au Champ d'Honneur" for example, in which a winged figure urges on a soldier; and M. Cordonnier's monument to Testelin, organiser of the "défense dans le Nord" in 1870-71: this is an important monumental work, consisting of a central column and bust, in front of which is a spirited group of soldiers, while a winged figure hovers behind. One of the worst, because most unsculpturesque, things in the place is M. Lami's "Danseuse," a ballet-dancer in short skirts, yet this seems to be the popular work of the year, if one may judge by the fact that it is one of the few of which photographs are plentiful; a melancholy indication that popular perceptions in sculpture are not much better in France than in England.

The "Société des Artistes Indépendents," who have been holding their exhibition in the "Pavillon des Arts Libéraux" at the Champ des Mars, were polite enough to send us a special invitation card for their exhibition, but we fear the kindest return we can make for the compliment is to decline any remarks on the collection.

THE FEVER HOSPITALS' COMPETITION.

THE Metropolitan Asylums Board propose to build two fever hospitals for five hundred beds each, one to be built at Tooting Graveney, to be called for distinction the "Fountain Hospital," the other at Hither Green, called the "Park Hospital." The instructions to architects for the two are identical; and the drawings are now on view in the rooms of the Imperial Institute. The names of those to whom first, second, and third premiums are awarded are given in the usual form under the head of "Competitions," on another page of this issue.

Mr. Waterhouse has acted as assessor in the competition. The instructions to architects, admirably drawn up, were so full in detail that there was really not much left to the judgment of the competitors except in regard to the best method of placing the buildings on the site, so as to ensure the most effectual isolation of the wards and the most convenient and economical planning of the whole for working and administration. The number and nature of the drawings to be submitted has been distinctly specified in the instructions, as it always should be in every competition. The premiums given in each case are 200*l.*, 150*l.*, and 100*l.*; the amount of the first premium to merge in the architect's commission if the plans are carried out. This is the only fault we have to find with the conditions; it is a common one, but one which in the proper interests of the profession we shall never cease to protest against. In every such case the working drawings must almost inevitably be made over again *de novo*, and the amount paid as a premium is not a penny too much to compensate for the labour and thought involved in making the preliminary drawings. The wards required are sixteen scarlet fever wards of twenty beds each, and sixteen small wards of two beds each; eight diphtheria or enteric fever wards of twelve beds each and eight small ones of two beds each; four isolation wards of one bed each and eight isolation wards of four beds each. Small infirmary wards are also required in connexion with each department. Added to this, of course, is the usual accommodation for medical staff, administration, nurses' rooms, and laundry, cooking, and stores; also receiving rooms and discharging rooms, with bath rooms and rooms for dressing and undressing attached.

The following general recommendations were included in the instructions:

"The administrative buildings should be situated as centrally as can be arranged, and convenient of access from the entrance, but so that persons only having business from the outside need penetrate as little as possible into the hospital area.

Subject to the above considerations, the buildings should be so disposed on the site as to ensure:—

1st. That each set of wards, with the accessories attached thereto, should be isolated.

2nd. That air should freely circulate round each block of buildings.

3rd. That the ward walls should be exposed to sunshine to the fullest practicable extent.

4th. That the airing-courts or playgrounds be accessible from each block, and be sheltered from north and east, but freely exposed to sunshine.

5th. That parallel buildings should be distant from each other at least twice the height of the building measured to the eaves when the roof is flat; or measured to half the height of the roof when its pitch is above 30 deg. from the horizontal.

6th. That the ground surface of the airing-courts and the surface between adjacent buildings occupied by sick should be protected from damp.

7th. That there should be easy and direct access between the several parts of the hospital."

It will be evident from the general conditions that the object should be to keep the administrative buildings as central as possible, and to keep the scarlet fever wards, as dealing with the more infectious form of disease, as far away as possible from connexion with the entrances and the public roads, and also separate from the site of the enteric fever wards.

The two sites are rather similar in general outline. Each of them roughly approaches the form of a rather obtuse-angled triangle with a rounded angle at the apex. Nearly all the competitors have adopted two-story wards, the ground floor wards being all built on arches so as to allow of the free circulation of air under them, this being one of the conditions.

Taking the Park Hospital first, the plan (No. 19) by Mr. E. T. Hall, to which the first premium has been awarded, is an exceedingly compact one, and the several departments are both well separated from each other and conveniently connected with the administration, which occupies a wedge-shaped area with the scarlet fever wards to the right and parallel with its right side, the wards being placed at an angle running nearly north and south, so as to have the east and west sun. The enteric fever blocks are placed to the east or opposite side of the administration site, parallel with that side of it and therefore at a different angle from the scarlet fever blocks; running nearly from north-west to south-east. They could hardly be arranged otherwise without inconvenience and waste of space, though of course if one aspect is best for sunlight an ideal plan would be one in which in all the wards were orientated the same way, and some competitors (No. 9 in the Fountain Hospital competition, for instance) have obviously aimed at this, though not without attendant disadvantages of another kind in regard to laying out. It may be a question whether, since the wards are narrow, and the sun can shine through them, an aspect with the long side to the south is not preferable to one with the long sides lying east and west; there is something, however, to be said in favour of either plan. The isolation wards are properly placed in the far rear of the site, south of the scarlet fever wards. The arrangements for intercommunication are very well planned, and make the lines of corridor as short as can well be consistent with proper isolation of the departments.

No. 7, by Messrs. Leonard Stokes and G. T. Hine, adopts the theory which we have just suggested, that whatever aspect is considered to be the best for one set of wards must be the best for all. The main lines of communication form two sides of a large triangle, within which, and filling up the base, are the administration buildings, and the wards all branch out obliquely from the two

main lines of communication, or, rather, they are all perpendicular to the base of the plan, or nearly so, while the traffic lines are oblique, so that the whole two sets of wards, the scarlet fever wards on the one side and the enteric fever ones on the other, are approximately parallel with each other. This appears to us the more correct theory, and on the whole it does not appear that there is much to choose between this plan and the first premiated one, except that it is somewhat less compact. It may be a question whether the receiving and discharging departments should be placed in such close contiguity with each other as they are in this case.

No. 22 (third premium) by Mr. C. W. Henman, also places all the wards in a parallel direction, but the plan is treated in a more rectangular fashion, which looks very symmetrical on paper, but is not so compact in regard to intercommunication as the other two; the scarlet fever wards especially are partially divided by a break in the corridor. The angles of the wards are canted, which we prefer to square angles. In the discharging department it is to be observed that the room for friends waiting opens separately to the outside of the building, the discharged patients emerging by another outer door contiguous to it; this appears preferable to having a door of intercommunication between the patients' dressing-room and the friends' waiting-room, as is the case in some others of the plans. This is a very well-prepared set of plans, though we do not think the general arrangement so good as the others; and the author has given a great deal of attention to the subject of ventilation; we should say authors, for though the plans are sent in in the name of Mr. C. W. Henman of London, we understand that Mr. W. Henman of Birmingham, architect of the Birmingham Hospital, has also been concerned in them along with his brother. The system of ventilation is intended to be entirely by propulsion, and the important point in connexion with it is that a system is proposed of straining the air as it passes out of the wards, so as to catch all germs that might communicate infection into the air. If this can be effectually done, it is a very important improvement, as it must minimise the danger of the spread of infectious disease from a hospital, a fear of which is one of the reasons why the neighbourhood of a fever or infectious disease hospital is so much objected to and fought against in every district in which it is proposed to place one. Mr. W. Henman has had a number of very carefully-conducted experiments carried out with the view of ascertaining how far germs can be filtered from the atmosphere by screens of cocoa-nut and manilla fibre kept damp with carbolic acid, and it is stated that the results have been highly satisfactory, under comparatively unfavourable conditions, as the air was propelled much more strongly against the screens than would be the case in ordinary mechanical ventilation. The following is the description in the report of the process of ventilation proposed:—

"In the roof space above the entrance corridor, to *each* block of wards, a chamber is formed with openings at the outer end where air is admitted and drawn through a screen, kept moistened with water, by which it is cleansed of smuts, dirt, and insect life and purified of micro-organisms. In cold weather it is warmed by steam or hot-water coils to any required degree, and by means of a rotary fan, turned by an electric motor, it is forced onward through a duct running the whole length of the building and diminishing in sectional area as it advances. The purified air is admitted to the wards, &c., along the centre of the ceiling and distributed throughout each apartment by means of a spreader; so that doctors and nurses will constantly be in a pure and changing atmosphere which, immediately it passes over a patient, will be expelled through a *purifying screen*, placed at the *head of every bed*, and kept moistened with a disinfecting fluid, practically harmless to human beings, but known to be capable of destroying disease germs. The *again purified air* will then pass up flues, in the outer walls, into a roof duct, increasing in sectional area towards the outer end, where it will discharge into the open through valved and louvred turrets, constructed so that the outflow will not be affected by movement of the outer atmosphere."

As the Committee have reserved to themselves the right to adopt any feature out of either of the premiated designs not carried out (we hope not without some extra compensation to the author), they might well give some attention to this important suggestion.

In the case of the Fountain Hospital, as before observed, the problem is very much the same as in the Park Hospital. In No. 16, by Mr. A. H. Tiltman, which receives the first premium, the enteric wards are placed at each side of the administration buildings, on the front portion of the ground and parallel to the entrance side; the scarlet fever wards are in the rear portion, well isolated, and running in the direction at right-angles to the others nearly north-west and north-east. We must again recur to the point that as one direction in regard to the sun must be the best, whatever orientation is best for one set of wards is best for all, and that the plan should determine the best position in this respect and be arranged so that all the wards can be faced the same way. This point is just missed in No. 5, the third premiated design, by Mr. Emerson, in which the lines of communication are admirably laid out, the main corridors going round the administration buildings in an approximate semi-circle or rather horse-shoe shape, and the whole of the wards branching out from this corridor. Of course it may be said that the scarlet fever and enteric wards are not on such a system sufficiently separated; apart from this the scheme is economical for administration, and leaves, perhaps, the largest open spaces of ground, but the defect remains that the wards are practically radiating, although not brought close up to the centre; and it would have been so easy, on the same scheme of planning, to have placed them all in the same direction (or nearly so) merely by a little modification in the mode of connecting them with the main corridor. In the second premiated design, No. 23, by Messrs. Beeston and Burmester, the administration buildings are kept very much more to the front than in any of the others, instead of wedging in between the ward blocks; the majority of the wards are built in the same direction (approximately at right-angles to the front), the diphtheria near to the administration, the scarlet fever at the back of the site; the details are well planned, and the whole set of drawings very carefully got up. The defect of the entirely front position of the administration buildings is, of course, want of concentration in the working.

We may have more to say on the subject when there has been time to go more fully into the details of the various schemes, as the erection of fever hospitals on this scale is a very important piece of sanitary work.

NOTES.

WE are very glad to see that a protest has been made by the Institute of Architects against the threatened infliction on us of a mere engineering structure of steel in the shape of the proposed new Vauxhall Bridge. A deputation from the Institute waited on the Bridges Committee of the County Council last week and explained their views, urging that the bridge should be a simple and dignified architectural structure in stone. Although the new bridge was talked of long ago, the former Bill for it was withdrawn in August last year, and the Council are now seeking for fresh powers, so that there is every excuse for opening the subject afresh and putting aside any former designs. The County Council might well take a precedent from the recent example before them of the fine stone bridge at Putney, which has met with universal approval. We may also commend to their notice a quotation from the conditions for the competition for a new bridge at Buda-Pesth, which is a fine example of the spirit in which such an undertaking should be entered on; "The bridges should be built not only in a substantial manner and correct from a technical point of view, but also in accordance with the demands of art, it being understood that they should not only serve as a means of communication but also should hold a dignified place amongst the most remarkable structures in the capital and Royal Residence of Hungary." That is the spirit in which a great city should go into work of this kind. A bridge over a large river may be, like London and Waterloo bridges, a noble architectural monument, or it may be, like those of Blackfriars and Hammersmith, a lasting offence, annoyance, and vulgarity. It rests mainly with the County Council whether the new Vauxhall Bridge shall come into the category of new beauties or new uglinesses of London. It is surely worth their while to give some consideration to this point.

THE festivities and rejoicings occasioned in Manchester and Salford by the formal opening of the great Ship Canal last week, have been quickly followed by a "Report," which will give pause to the local enthusiasts and to the ratepayers whose money has been so freely advanced for the completion of the Canal. This report is one which has been prepared by Mr. G. H. Hill, the Engineer to the Manchester Corporation, and submitted by him to the Lord Mayor of that city. The most optimistic shareholder or ratepayer cannot but lose some of his confidence and hope, as he considers this lengthy and intricate document. It is still another but half-smothered cry for more money. In February of this year the Traffic Committee of the Canal recommended that prompt and earnest efforts should be made by the Executive Committee to carry out a formidable list of works — buildings, cranes, grain-elevators, roads, railways, wharves, docks, tanks, silo, fire appliances, lighting, salvage-steamer, coal-tips, salt-tips, dredging, jetties, pontoon, &c., &c., &c. The executive committee was powerless to execute such a number of works, which would have cost another million pounds, while the funds available did not amount to half that amount. Indeed, Mr. Hill estimates that the funds available for such works amount to only 450,000*l.*, and, as he considers that of this at least 250,000*l.* should be kept in reserve for contingencies, the sum of 200,000*l.* only remains. The traffic committee accordingly modified its too-ambitious scheme and submitted an amended list of works which were in its opinion "most urgently required and absolutely essential for traffic now being negotiated for and in course of development." These works are estimated to cost 443,000*l.* In addition to this expenditure, more money will be required for the execution of "deferred works," *i.e.*, works which have been included in various Acts of Parliament, but which have not yet been carried out; among these may be mentioned docks at Runcorn, Warrington, and Ordsal, railway at Warrington, and hydraulic lift at Barton. Truly the Manchester Ship Canal Company is not yet out of the wood, and the Manchester Corporation cannot be sure that it will not have to dip its hand still deeper into its pocket. The report makes no mention of the traffic receipts during the last five months, nor of the working expenses during the same period. This silence is unfortunate, as it gives countenance to the opinions which are now so freely expressed, that the canal is, from a monetary point of view, a huge failure.

IT would evidently be greatly to the advantage, both of the railway companies and the traders, if the Railway and Canal Traffic Bill were proceeded with without delay; for it was stated in the House of Commons last week that there are thousands of accounts still outstanding which are awaiting the passing of this Bill.

before any settlement can be arrived at. The inevitable retirement of Mr. Mundella from the Board of Trade may, perhaps, account for the delay in fixing a date for the second reading; for Mr. Bryce will assuredly find the solution of the railway rates problem no light task, and that it will take some time to gather up the threads of this complicated business. The measure which he has to take in hand is certainly a short one, but if passed into law it will, everybody will hope, prove effective. A rather singular incident in connexion with this subject occurred in the House of Commons last week. Upon the introduction of the Rates and Charges Bill of a small Railway Company, Mr. Morton moved its rejection "in the interests of the trading and agricultural community," on account of the maximum rates proposed to be charged. But after Mr. Morton had spoken very eloquently and forcibly in support of his objection, it was explained by the Secretary to the Board of Trade that the actual effect of the Bill was to reduce existing powers of charging.

FROM the *Berliner Philologische Wochenschrift* (May 26), we learn that Dr. Waldstein has found at the Heraion, in the lowest stratum of the excavation, a layer of small objects of genuinely Egyptian fabrication. They are mostly of porcelain, and among them is, *e.g.*, a small lion with a hieroglyphic inscription, several cats, the god Bes, Egyptian scarabæi with cartouches said to be of Thutmes III. and Amenophis. These wares must, of course, have been imported; they are all of small size, so Herodotus was clearly not drawing on his fancy in the charming picture he has left us in Book I. of the Phenician bazaar, held in the bay of Argolis. Instances occur of the adaptation of these foreign wares to home use—*e.g.*, a scarabæus is used to decorate a hairpin. It is hoped that the find will shortly be published, as Dr. Waldstein was unusually prompt in the issue of his first instalment of the Argos discoveries. The same number of the *Wochenschrift* contains a curtailed account of Dr. Winnefeld's paper, read before the Archæological Society of Berlin, on Hadrian's villa.

THE "Association Provinciale des Architectes Français," founded at Bourges in 1889 to serve as a bond of union between the provincial architectural societies, will hold its sixth general meeting at Toulouse, the centre of the "Société des Architectes du Midi de la France," from June 6 to 9. The programme of subjects to be considered includes those of public competitions, architects' charges, establishment of a "Caisse de Secours," regulations for laying-out of streets, rewards to artisans in building work, and above all the question of architectural education in the provinces, and the formation of provincial schools of architecture, as a means of breaking through what is considered to be the too great centralisation of architectural education in Paris. Visits will also be arranged to the architectural monuments of Toulouse, and excursions to Albi and Carcassonne; and on the 9th the meeting will adjourn *en masse* to Lyons to attend the annual Congress of French Architects to be held, as already mentioned in our columns, in that city.

ON the 22nd ultimo were sold by auction a set of portraits, life-size, of Kings George I.–IV. and William IV., by Kneller and Allan Ramsay, and after Sir Thomas Lawrence, Sir Martin A. Shee, and Kneller. The pictures were described as having been removed from the offices of the old South Sea House, Threadneedle-street. They represented past Governors of the company, founded in 1711 by Harley, Earl of Oxford, and Sir John Blunt. The original office, long known as Old South Sea House, fronted Old Broad-street, and had previously been used for the Excise. Of Cockaine House Cunningham, in his "Handbook of London," says that the site is unknown: in the Parish Clerks' "New Remarks," 1732, mention is made, for St. Peter-le-Poor (Old Broad-street) parish, of "a large house built by Alderman Cockaine, formerly the Excise-office and the South-Sea Company's House;" whilst Aubrey, in his "Lives," says that Eliab, brother of Dr. William Harvey, "bought about 1654 Cockaine House, now the Excise-office." The South Sea House, which Charles Lamb, in the first of his "Essays," likens to Ossian's desolate Balclutha, was the new building in Threadneedle-street, east end, north side, which Noorthouck characterises as "a magnificent structure." On part of the site of the old house in Old Broad-street was erected, in 1832-4, the existing premises of the City of London Club, after the plans and designs of P. Hardwick, R.A.

ON December 13, 1884, we printed a description of an addition, in the shape of an east wing, that had been made from Mr. Matthew Wyatt's designs, to the Middlesex Hospital, for out-patients and the resident staff. We understand that the Governors propose to erect additional accommodation for the Cancer Wards (women's) side. The hospital was originally established in Windmill-street, Tottenham Court-road, and removed ten years later (1755) to its present quarters, erected by, we believe, James Paine. These were extended in 1775, and again in 1848 with the "Sir John Murray's" Ward, built by T. H. Wyatt, who bequeathed 100*l.* to the hospital. The Cancer Ward, planned by Howard, the philanthropist, is due to the munificence of Samuel Whitbread, M.P., who endowed it with 4,000*l.*, in order that the cancer patients might be tended therein for life.

A BENEFICIAL alteration is about to be made for the parish of St. Peter's, Walworth, one of the most densely-populated districts in South London. The Goldsmiths' Company have agreed, as we learn, to expend 700*l.* upon the laying-out and planting, by the Metropolitan Public Gardens Association, of the graveyard around St. Peter's Church; and in pursuance of an order in Council all human remains will be removed from the crypt underneath the church. St. Peter's was built in 1823-4, at a cost of about 19,000*l.*, after Soane's designs. The west front has an Ionic order, the lower story of the tower is in the Corinthian style, the upper story being composite.

ON the 30th instant will be put up for sale by auction the celebrated Adrian Hope collection, which includes sixty choice works by the old Flemish and Dutch masters, with others by Rubens, Giorgione, and Domenichino, and examples of the modern Belgian school. The earlier "Hope" paintings were seen and commented upon by Sir Joshua Reynolds when he visited the Hague, where the pictures were first gathered together by members of the family. They were removed from Mr. T. Hope's house in Duchess-street, Portland-place, to Hope House, at the south-east corner of Down-street, Piccadilly, which was built for his son by W. Cubitt & Co. in 1848–9, under the late Professor Donaldson's superintendence. The house (now occupied by the Junior Athenæum Club), is said to have cost 30,000*l.*, the two fronts being of Caen stone, with marble panels, the iron railing by André, of Paris, and the interior decorations, carvings, &c., by Dussillon and a staff of French artists. We believe that subsequently most of the pictures and objects of art (many of the latter coming from Sir W. Hamilton's collection), were transferred to Mr. Thomas Hope's seat, Deepdene, near Dorking. That house, built in 1799 for the Duke of Norfolk, was enlarged for him by P. Atkinson, from Hope's own designs.

AT the Architectural Association's Rooms in Great Marlborough-street, on the 24th ult., Mr. Stirling Lee gave a most interesting lecture on "Sculpture in relation to Architecture"; not a lecture in the formal sense so much as a pleasant and enthusiastic talk of a sculptor with architectural students, very practical in every sense, and very instructive. Mr. Lee traced the growth of figure sculpture from the plain moulding through its various stages, and had a large number of photographs and models to illustrate his remarks. He dwelt upon the value of shade perception both to sculptor and architect; showed how, in most old examples of architecture, the leading lines of the building had been kept and considerably assisted and strengthened by the sculpture; with some interesting examples from Pisano's and Giotto's work; and laid stress on the fact, which all architects, both old and young, should lay to heart, that if *good* architectural sculpture is not to be had, it is far better to leave it out altogether rather than spoil a building by cheap work, which is not only an eyesore in itself, but ruins the building on which it is placed. The well-known example of the Institute of Chartered Accountants was, of course, mentioned as one of the most successful buildings recently erected in which sculpture in relation to the building plays so prominent a part. Mr. Lee very generously offered to open his studio on Saturday afternoon (June 2) to members of the Architectural Association, who might be interested in seeing it, and no doubt many who were unable to be present at the lecture will be glad to avail themselves of this opportunity of seeing the work of a sculptor who has so specially studied his art in relation to that of architecture. The small audience — it scarcely numbered over a dozen—is not, however, a hopeful sign. We could find, it is true, no mention of this paper in the calendar of the official notes of the Architectural Association, and it might be desirable to point out to those responsible for the well-being of the society that men of Mr. Lee's ability and standing can hardly be expected to give up their valuable time for the benefit of the Association if there is not a more encouraging response in the form of a larger attendance of members.

A SPECIAL three days' sale of needlework, of bric-à-brac, and of carved English and Flemish furniture was held last week at the Royal School of Art Needlework, at Exhibition-road, South Kensington. There is much of interest to architects in the work-rooms and sale-rooms of this school, which are open all the year round. Besides some valuable Flemish tapestry, we may draw attention to some Gothic panelling in oak from Belgium. It consists of a dado, 62 ft. in length and three panels high, finished with a moulding; the lower panels are linen-fold, and the upper carved with scroll foliage of a German type; the carving has a good relief, and the whole height is about 6 ft. In the Oak-room is a bedstead from the Archbishop's Palace at Malines, of a somewhat later period. It is a canopied enclosure, the back and one end being of plain panelling, while the foot has an open arcade of four arches; the front opening is enclosed by caryatid angels and grotesque carvings supporting a good frieze and cornice; the bed-plinth is divided up and well panelled. In an adjoining room are some chairs of Louis XVI date with elastic cane backs and seats, the cane being gilded and set in an enamelled wood framework, carrying us back to a time when cane-work was not confined to the commoner sets of furniture. Some modern beaten brass-work, executed from the designs of Mr. Fairfax Wade, should be mentioned. We may state that the school execute architects' designs in needlework, some good copies of old work being shown, as well as some church work executed from the designs of

Messrs. Morris, Wade, and Selwyn Image. By the latter there is an altar-cloth worked with three archangels and two attendants; the figures are in outline of dark brown silk on a white cloth, and are connected together by a broad band of foliage worked in green wool, the style being bold, so as to be effectively seen at a distance. A fine old bible of 1640 (R. Barker, London) is shown, in a case copied from that worked by Queen Elizabeth, and now in the Bodleian Library; the design has conventional roses and scrolls, the back having an upright stem with roses upon it; all these are in gold upon deep-red velvet. We have already referred to the work of the School, and architects will be interested in it as a place where they can have their designs executed under their own supervision, which is welcomed by the authorities.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AN ordinary meeting of the members of this Institute was held at 9, Conduit-street, on Monday last, Mr. J. Macvicar Anderson (President) in the chair.

Mr. J. Tavenor Perry read a paper entitled "The Influence of the Hanseatic League on the Architecture of Northern Europe."

Mr. Perry said that his paper would not be an account of how one district and alien style affected another, but its object would be rather to show how the living and progressive styles of succeeding periods became transformed by the necessities and peculiarities of an influential and semi-political association of merchants who inherited and carried on the traditions of the earlier German schools at a time when German architecture was, to quote the recent Address by Sir Frederic Leighton,* "Stamped with a stateliness and nobility to which the days of the Minnesänger were surely more propitious than those of the rugged burghers who were soon to rise to power and to rule in the art-producing world." In the course of several visits he had paid to the lands about the Baltic Sea, he had been much impressed by the similarity existing between the buildings, however widely they were scattered, and however divided were the provinces by ethnographic or political differences. In other countries more or less homogeneous in their governments and people, such as France or Spain, strong local differences in style always existed; but over the vast area of Northern Europe which stretches from the sand-dunes of the English Channel to the granite islands of the Gulf of Bothnia, there could only be said to have been one tyle carried on throughout the Middle Ages—a style quite dissimilar to those of the rest of the Continent, and executed with a uniformity of detail, marking a distinct and complete school. There was nothing in the geological conditions of the countries to account for such coincidences; and the similarities, so obvious, were evidently due to other than merely geographical or political accidents. The subject was too large and the countries involved too extensive and scattered for any one person, and certainly for any one architect still engaged in practice, to deal with in anything like an exhaustive way, but he had made an attempt to put together such information as he had been able to acquire, with the idea of sketching the outline of a theory, to be filled in hereafter or corrected by those who may have had, or may obtain, better advantages in further information or personal acquaintance with the buildings. Mr. Perry then gave a brief history of the rise and progress of the League, and afterwards an account of the characteristics of the Baltic style, together with some of the most marked features in its arrangements and details; and, later, he endeavoured to show in what way it affected the architecture of surrounding countries, and how far the influence of the later phases of the style still survives. He pointed out how, in its gradual rise, the centre of authority of the League shifted from the banks of the Rhine to the shores of the Baltic, and the effect of this change on the architecture of the district. The earlier influences of Cologne, first on Hildesheim, and then, through Hildesheim, on Denmark and the Baltic coasts, were manifest in the great apsidal churches of Ribe, Roeskilda, and Lund; but when, later, Lübeck became the head of the League, she also became the centre of architectural influence, and the ecclesiastical buildings of the fourteenth and fifteenth centuries in the north of Germany were much more affected and inspired by the Dom of Lübeck than by the far finer, but less German, Cathedral of Cologne. Wherever the agents of the League settled, they seemed to have indoctrinated the people in the mysteries of brick-making, until, in countries where stone and granite had always been used, the new-fashioned brick eliminated the nobler material. Besides this, there were peculiarities of detail and design, partly arising from these causes, and partly due to mere localisms, which were evident in the buildings throughout the countries controlled by the League. The home of the League and its principal cities were in Wendland, which embraced Pomerania, Mecklenburg, and parts of Lower Saxony, a country of great sandy plains sprinkled over with huge granite boulders brought down by the ice from higher latitudes. Here stone was only to be procured by importation from Sweden or elsewhere at great expense, and the architecture which grew up was almost exclusively of granite and brick. In Stralsund, however, which had closer dealings, perhaps, than any other of the Hanse ports with Sweden and Wisby, stone continued to be used for ornamental purposes in connexion with bricks; and in the beautiful church of St. Nicholas, erected between 1311 and 1330, the capitals, bases, and string-courses were of Swedish limestone. . . . Throughout Sweden and Norway were fine beds of building stone, easily procurable, but in the Hansa town of Bergen the two churches were of brick-work; Upsalda Cathedral was mainly brick; and although the earlier work of Linköping, Lund, and Orebro, was executed in stone, the later additions on the western fronts were wholly in red brick. In Livonia, again, where limestone abounds, such old buildings as still remain in the Hansa towns of Reval and Riga were mainly of brick. The case of Wisby and the buildings of Gotland were wholly exceptional. This island, like the neighbouring one of Öland, contained good building stone, of which most of the churches were built during the period when Wisby, having risen into importance after the destruction of Jomsborg, looked to Cologne as the head of the League; and, besides, the capture and destruction of Wisby by the Danes, although it consolidated the power of the League, came too soon to allow the later influence of Lübeck to considerably affect its buildings. After mentioning some examples of this influence on Hull and other places in England, and tracing to it the introduction and development of that brick architecture which culminated in such edifices as Hatfield and Hampton Court; Mr. Perry next referred to those features of architectural treatment which must be regarded as peculiar to the Baltic style, and which, he said, distinguished it, even more perhaps than the material employed, from other contemporary Gothic work. The most important of these, the arrangement of the church plans, seemed to have been overlooked by most writers on the subject, and was not referred to in Fergusson's Handbook, although the two exceptional plans of the Dom and Marien-Kirche at Lübeck were therein published. Yet this plan was essentially different from the methods adopted in France and England. The great differences existing between the origin and development of the plans of the eastern terminations of French and Baltic churches had scarcely been noticed, and no attempt seemed to have been made to account for them; yet a comparison of the plans of the Cathedrals of Lübeck and Cologne would show that their designs could not have been developed from the same starting-point, or have been arrived at by the same methods.*

Mr. R. Phené Spiers, in proposing a vote of thanks to Mr. Tavenor Perry, said it was nearly thirty years since the writer of the paper, who was the first Pugin Travelling Student, decided in making his tour to see what influence the cathedrals had on the buildings surrounding them. Mr. Perry then took the Cathedral of Durham, and made an elaborate and careful study of it. He (the speaker) had, on several occasions since, suggested to the Pugin students that they should follow a similar system to that which Mr. Perry originated, but without success. Mr. Perry had apparently still carried the idea in his mind, and, as the result of a survey extending over many years, had produced a most valuable and suggestive paper. In the hope that students would even be inclined to go a little further, to the Baltic provinces, he had brought down some drawings of the old towns there. Dantzig was interesting in this sense—that the church had a somewhat different character to those Mr. Perry had referred to. It was begun by the Knights of the Teutonic Order, to whom reference had been made. The church was of considerable magnitude, being about 350 ft. in length and some 100 ft. wide, with a vaulting of 98 ft., so that its stupendous effect and grandeur would be imagined. The Castle of Marienburg, near Dantzig, was also interesting as having been the seat of the Knights of the Teutonic Order for 153 years; there were portions of an older Schloss, which existed prior to their settlement. That which would be most interesting to architects was the great hall in which the conclaves were held. The stone tracery introduced into the windows of the building was rather suggestive of Venetian influence, and it was possible, although he could not find it stated in the German guide-books, that Venetian masons were sent over to carry out this work. In Mr. Perry's paper, he had pointed out that the principle of the chevet was of German and not of French origin. Looking at Mr. Perry's diagrams, there seemed to be some reason for that, but, at the same time, although he contended that the French chapels were always arranged on the outside of the choir aisle, the Hanseatic churches had their chapels placed on the outside of the central apse.

Mr. Perry remarked that the one was outside the semi-circle, and the other outside the polygonal figure.

Mr. Phené Spiers, continuing, said that Mr. Perry at first seemed inclined to agree that there could not have been much Hanseatic influence in the case of Westminster Abbey, but he appeared afterwards to fancy there might have been some connexion between the two, the chief reason for that being the influence of the League at the time when the Westminster chevet was being built. There was, however, another reason which might be given for the peculiar arrangement. The first building erected by Henry III. to Edward the Confessor's church, was the Lady Chapel, which was 30 ft. wide, and, as the wall had been found close to the east end of Henry VII. chapel, it showed that it must have been of extraordinary length. When it was determined some twenty years later to build a chevet, in imitation of those being erected in all French cathedrals, it naturally followed that, with the much wider chapels, they would extend west of the apse, and it seemed to him that the western buttress, which was the same as the western buttress in the Dom at Lübeck, was due to the setting-out of the plan, and the resemblance accidental. The last paper read before the Architectural Association was one by Mr. Bolton on practical notes on travelling. The author of that paper gave advice with regard to France, Italy, and Spain, but he seemed to have altogether forgotten Germany. He (the speaker) was always ready to give advice to students who were about to travel, but they seldom asked him for information about Germany. Mr. Perry's paper would be of great service, therefore, in pointing out the very great interest of the North German churches. His last tour there was made three years ago, when he visited, amongst others, the churches at Paderborn and Soest, which had a magnificent effect, and were most valuable studies for the young architect. The cathedral at Münster also would well repay the student, even if he did not extend his journey further.

Mr. Charles Fowler said that many years ago he had the honour of bringing this subject before the Institute, and he was glad to find that it had been so ably followed up by Mr. Perry. With respect to what had been said as to brickwork, he knew of two examples dating back to early in the twelfth century, viz., the Schlosskirche at Quedlinburg, and the church at Jerichau. These were both very large churches, and entirely different in their arrangement to any of those referred to that evening. Unfortunately, both of these churches had been terribly restored; but he had spoken of them as they appeared to show a strong brick influence, anterior to the period referred to by Mr. Perry. He had refreshed his memory last autumn as to some of these churches, but he

* Address to the Royal Academy students, December, 9, 1893.

* It may be as well to make it clear to our readers that the reason we give only short summaries of papers read at the Institute, while we usually print the Architectural Association papers nearly in full, is merely in response to the wishes of the Council of the Institute, who prefer to consider their papers as copyright, and to retain the full paper for their own publication. As to the wisdom of this policy we have our own opinion, but the Institute of course have a right to their literary property if they choose to exercise it.

found to his regret that in almost every case restorations had taken place, and it was difficult to know how much of the original work remained. Nearly all the churches of North Germany, from the middle of the fourteenth century, were on the plan of three aisles of equal height, which certainly produced a grand effect internally; but there was a vast space, and the details, as regards the doors, arches, and windows, were repeated throughout the church. The great gateways to some of the towns were also very interesting. Mr. Fowler concluded by seconding the vote of thanks.

Mr. W. H. James Weale (South Kensington Museum) said it was only of late years that attention had been given to the influence of the art of one country on another. He had listened to the paper with great interest, having given some attention to the influence of the Hanse on Flemish architecture. One or two points, however, he would demur to, such as the initiation, in the countries in which the Hanse was established of the art of brick-making. He believed that brick was used in Flanders prior to any influence of the Hanse. In that country three influences were at work, the first being that of the Benedictines, as shown in the lower part of the Cathedral at Bruges; secondly, the Cistercian influence, which brought in French architecture; and next, the influence of the school of Tournay. The stonemasons erected many buildings of stone in Flanders, but, at the same time, there was always brick construction going on, and there were remains of brick-work of the end of the twelfth century in some of the village churches. Fine examples of brickwork were to be found at Ghent and Bruges. As to Damme, he did not think the Hanse had any influence on the building of the Hôtel de Ville in that town. The Cathedral of St. Sauveur at Bruges differed much from the other churches there in the setting-out of the side chapels. Its architect was employed by the Hanse to build their Hôtel at Bruges, and had no doubt visited the other Hanse towns, so that he built the five chapels on a different plan to anything else to be found in Flanders, and very much like the plan of the chapels at Lübeck. The arrangement of those chapels had always struck him as being peculiar, but very grand.

Mr. H. W. Brewer said that through the whole of Germany there were two distinct kinds of churches. One was a class built in the dominions and under the influence of the Prince Bishops and other ecclesiastical dignitaries; the other was erected in the Free Towns. Those built by the Prince Bishops required a number of chapels, whereas the churches in the Free Towns were constructed to hold very large congregations served by a few priests. In episcopal cities, like Cologne and Bamberg, it would be found that the churches, as a rule, had their clearstories, a certain number of chapels, transepts, and generally more than one apse; whereas in the Free Towns the churches simply consisted of vast halls, with the aisles sometimes carried round the apse. The German arrangement of the apse was very puzzling, and Sir F. Leighton, in a paper read at the Royal Academy, found much fault, and to a certain extent justly so, with the apse of the cathedral at Augsburg. Two architects had been at work there. The first planned the arches and his apse the same width as those in the choir, and as the arches of the choir were wide, it gave a slight cant to the arches, so that they appeared almost to give the effect of a square-ended church. He, however, got an ornate arrangement of square and triangular bays, and that led to his arranging nine chapels round the chevet. The man had certainly an idea in his head, but the architect who succeeded him made the whole design absurd, by putting a huge window in the east bay, and leaving the other bays with only little holes up in the vaulting. Mr. Perry had referred to painting on brickwork, and he (the speaker) had come upon some remarkable examples in Germany. The largest specimen he had ever met with was on the walls of Ingolstadt, a town which retained nearly all its ancient walls, gates, and towers. The machicolations were absolutely painted upon the walls, and the remainder of the space was covered out like stone. He had seen a tower with painted windows and men looking out of them. There was one fact which strongly corroborated the view taken by Mr. Perry as to the use of brickwork in London. When Ralph Jocelyn, the Lord Mayor in 1477, restored the City walls, he found those by Aldersgate and Cripplegate were in a bad condition. Now, although the walls were of stone, he built his parapets and additions in red brick, as could be seen by some of the old engravings at the Guildhall.

Mr. A. S. Flower wished that Mr. Perry would say a word or two more about the reasons which induced him to attribute English brickwork to German or Hanseatic influence. It would be interesting if he could say that he had, in the course of his reading, come across any definite traces of the influence of the Hanse merchants, in importing bricks, doing the work of brick-making, or in any way influencing the trade. So far, they had only had coincidences.

The President said the paper that evening led one to reflect on the intimate connexion between commerce and architecture. Originally a small association of merchants, this League became ultimately an association of great cities, spreading their influence and exercising political power, not only in their own towns, but also in foreign lands. The connexion between commerce and art was very direct and remarkable. It was illustrated over and over again in the world's history, and nowhere more than in the case of their own country, which spread its influence not only over their own land, but, in these days of colonisation, to the most distant ends of the world. How much, then, did it behove them to realise the influence their own art might exercise on this land and the countries they colonised. A league consisted of individuals, and it would be well if each individual architect, composing what might be termed the league of architects, would only realise that he should design not merely for his own delectation, or to indulge his own fancies, but that his designs would have an influence for good or evil on his own day and generation, and on succeeding ages also. If architects only realised that, he believed they would be more careful in the designs they sometimes gave birth to.

The vote of thanks was then put, and carried by acclamation.

Mr. Tavenor Perry, in replying, said that Mr. Weale had thrown a new light on St. Sauveur at Bruges. Referring to a painting upon brickwork at Tattersall Castle, in this country, it would be found that in the brick groining they had plastered over the soffit, and had painted the brick joints on the plaster. As to brickwork or bricks coming from abroad, he believed that a great deal of the bricks used at Sandwich were imported from Holland.

The President announced that the next meeting would be held on June 11, when an election of members would take place, and the scrutineers appointed at the annual general meeting would bring up their report, and declare the names of those elected to serve on the Council and Standing Committees, and to act as auditors for the year 1894-5. At that meeting Mr. Bernard Dicksee and Mr. Lovegrove would raise a discussion on the election of Fellows of the Institute.

The proceedings then terminated.

THE ARCHITECTURAL ASSOCIATION:

THE PRACTICAL SIDE OF TRAVELLING.

THE last ordinary meeting of this Association for the present session was held on the 25th ult., in the meeting-room of the Royal Institute of British Architects, Mr. E. W. Mountford (President) in the chair.

The following new members were elected, viz.:—Messrs. R. C. Neat, P. A. Lamb, L. Sage, and P. R. Nathan.

The first summer visit was announced to take place on Saturday, June 2, to the Houses of Parliament and Westminster Abbey.

The President stated that he had received a letter from the Architectural Association Prize sub-Committee, saying they had unanimously awarded the studentship to Mr. C. C. Brewer. The sub-Committee considered Mr. Brewer's drawings and sketches of altogether exceptional merit, so much so that they hoped the whole of them would be hung at a general meeting, for the benefit of the younger students of the Architectural Association who might be competing in future years.

A vote of thanks was passed to Mr. Stirling Lee for his lecture on Sculpture on the preceding evening; and it was stated that he would be pleased to receive any Architectural Association students at the Vale, 306, King's-road, on Saturday, June 2.

Election for Officers.

The President said that, before calling on the scrutineers to hand in the results of the election, he thought it right to refer to a circular which had been sent to various members of the Association. The Committee felt,—and he had been asked to express their feeling,—that such circulars were not at all desirable. They wished in no way to curtail the liberty of the members, but it was not right that one section of the Association should endeavour to influence the election of the Committee representing the general body. It was obvious that if that idea were carried out still further, and each class sent round a circular, the whole thing would tend to disorganise the Association, and would lead to a state of affairs which would be most deplorable. He did not suppose for a moment that there was any improper intention in sending out the circular, but it was better not to circularise, if possible, as, amongst other drawbacks, it led outsiders to make unkind remarks about the Association.

The President then read the report of the scrutineers, which stated that 438 voting papers had been sent in, of which 17 were rejected as invalid. The result was as follows:—Unopposed; as President, Mr. E. W. Mountford; hon. treasurer, Mr. H. W. Pratt; hon. librarian, Mr. Stonhold; hon. secretaries, Messrs. F. T. W. Goldsmith and B. W. Fletcher; elected as Vice-Presidents, Mr. A. B. Pite, 273 votes; Mr. F. G. F. Hooper, 187 votes. As ordinary members of Committee, Mr. W. D. Caröe 376 votes; Mr. J. Begg 306 votes; Mr. E. S. Gale 306 votes; Mr. F. R. Farrow 296 votes; Mr. Paul Waterhouse 291 votes; Mr. E. Woodthorpe 287 votes Mr. G. H. F. Prynne 274 votes; Mr. T. Moore, 255 votes; Mr. W. H. Seth Smith, 254 votes; and Mr. Owen Fleming 205 votes. The above formed the Committee.

Mr. Earle proposed that the votes given to the whole of the candidates should be announced. This was seconded by Mr. Brodie, but, on being put to the meeting, the voting was so close that the President thought it would be better to leave the matter as it stood. Votes of thanks were then passed to the scrutineers.

On the motion of Mr. E. W. M. Wonnacott, seconded by Mr. S. B. Beale, a cordial vote of thanks was passed to the retiring President, Vice-Presidents, and other officers of the Association, which was duly acknowledged by the President.

Mr. A. T. Bolton then read a paper on "The Practical Side of Travelling," from which we extract the following:—

In deciding on any proposed tour a certain amount of previous study is generally advisable, and is to be obtained either from those who have been there or from books.

As to books it is very annoying on your return to find that you have failed to see some well-known example in some place you have visited, and of which you have seen drawings in some book. Many illustrations of old work are sensational in character, and sometimes positively misleading, but have a value if you have seen the thing itself. The best plan of study to adopt is to arrange your notes under the names of towns, placed in alphabetical order, putting down the work of all styles, the name of the artist, and the description of drawings. These notes are best on foolscap sheets of paper which can be pinned together and taken with you. You will soon be able to judge what is worth an effort to see, and what is not, according to the credit you assign to each artist after seeing a few examples.

The one indispensable book is a guide-book of the latest edition, and the best repute, however dear, as information is money in travelling, and a mistake in making an excursion or choosing an hotel would easily cost double the price of any guide-book, to say nothing of the saving of tips to local touts, rendered unnecessary by good maps. For Italy Baedeker is best, for Spain Murray, and for France Hachette, and I specially recommend the Departmental Guides of the latter, which are very useful indexes of all that there is of interest, in each town or village of the Department.

Calling on people is not always successful in the way of obtaining positive information on points of detail; "Oh, you know, you just take a bag, and go right south, and come back by degrees," being *one* style of friendly advice. As to going direct south when on a long tour, there is much to be said either way. One reason, against, is that it is not always convenient to start so early in the year, and another is that you are translated into a new style of work which has no direct bearing on your own; whereas if you go by degrees through France you pass through districts full of work which resembles, but is better than, what you are doing at home, and naturally you can get to work on it at once. Moreover, when you do arrive south, you will have acquired some skill in drawing, and have learnt something of the later results, and meaning, of the earlier work

which is met with further south. It is, of course, a question of season and climate which you must look into. Egypt is visited in the winter, Greece in the early spring, Rome is left after Easter, Florence at the end of July, and so on. Spain can be visited either in autumn or spring, and a winter in Seville may be most agreeable.

As to the countries to visit, Belgium and Germany are good for brickwork and small buildings allied to our own; France should make you logical, Spain critical, and Italy enthusiastic.

Programme is the great feature of French work, the logical following out of certain ideas, excluding others considered as non-essentials. Spanish work invites criticism by the dash with which the work appears to have been done, for form, outline, and programme are less considered, and things are often either masterpieces or absurdities. In Italy you will be roused to enthusiasm, because there you will see good work of all styles, and the early origins of most subsequent developments, as well as the acknowledged masterpieces of all the three arts.

Leaving, however, these generalities of where to go, let us consider what we have to take with us.

The subject of to-night, the "Practical Side of Travelling" can only be useful if treated with a detail which has a large element of the ridiculous, but I am not afraid that you will fail to perceive that side of the question. However, to begin with the question of luggage—I never knew any one who took too little, but some who would have been glad to send half theirs home again. The easy manner in which the would-be traveller dismisses the subject previous to departure is in amusing contrast to his sentiments a few hours past the Channel. I had once to use all my influence to prevent a friend coming out to me in Italy, plus a portmanteau, but he candidly owned, on arrival, that no sooner had he arrived at Calais than he was thankful to have only a Gladstone.

One reason for this luggage question, which it would take too long to examine in detail, is that the heavy luggage is registered, and hence there are nothing like the numbers of porters at the stations that we have. In making a change, or getting into a train, you will probably have to rely upon yourself, and it is of the first importance to be able to carry your goods, yourself, at need. This condition is the determining one in all points of luggage. Registration is fallacious, because, first, it involves arriving early at the station, the process ceasing ten minutes before the train goes; consequently there is generally a great crowd at the luggage barrier, and it is most annoying to have to be waiting about for your turn, when you want to be securing your place in the train. Secondly, it involves waiting at the other end, as the process of delivering the luggage does not commence till the train is gone, and is often very slow, as in Paris, where, I am told, three-quarters of an hour is a common time to wait. Hence, if you had nothing registered you would have been off, and arrived in your hotel in the same space of time. Finally, you can only register as far as the ticket goes; luggage above a certain weight has to be paid for, and in some countries no allowance is made at all.

Assuming, then, that nothing larger than a Gladstone is admissible, the next question is number of inches. Here the Indian mail gives a clue. The mail through Italy has a limit of 20 in. by 10 in. by 12 in., and I have had a 24 in. taken to the van. The same 24 in., I may add, I was only too glad to get rid of later on for a 20 in., which I consider the largest size necessary even for a year.

So much for No. 1; next, as we are architects, comes the question what size board shall we take.

Finally, I decided on a half imperial, which is really an excellent size. I then had a case made of waterproof canvas bound with leather, opening the long side, with two straps and two buttons for the flap. This case is best with a flat, light, iron bar along the top to attach the handle to, as, otherwise, you will find that the flap will pull out of shape.

Have this case wide enough to take the half imperial board (in a 2s. 6d. portfolio with T-square, two sets squares, and 12 in. scale), a stool that will fold up flat, a roll of lining-paper, and an easel.

1st. The board. This you will find best without ledges, but framed with steel in the thickness, as made by Stanley for abroad.

2nd. The portfolio. This is useful to carry about in the street, as it excites less attention, and also to hold the drawings as you complete them, and the paper you still have to use.

3rd. The T-square; for abroad, the extra cost of mahogany is well worth while. The great problem is the length, and after trying both ways, I advise you to shorten it, so that its total length is that of the board. It is, of course, sometimes a nuisance that it will not reach the edge of the paper, but it is still worse to carry it about projecting in a dangerous manner outside the portfolio. It is also a troublesome thing because of the thickness of the short arm, and I think the best thing to do is to buy one large or two smaller sketching-blocks, which will make up the level over the rest of the board's surface.

4th. The drawing-paper.—Take, say, six sheets imperial (cut in half) of hot-pressed and the same of 90 lb. cartridge, with some cut up tracing-paper and a roll of lining-paper; this latter should be the best, for the common tears easily and the other is only 10d. a roll.

5th. The easel.—This is a matter of opinion, but personally I find it very useful. The 3s. 6d. sold at the stores, which folds in a very ingenious way, is a good one to take, and you might have it reconstructed to fold into three, as then you could stand to it at need.

That completes our second package, and is of course only necessary if you are going away for three or four months. If for less time, the third that I am about to describe will be sufficient. This is a bag or case of canvas, in two thicknesses, and water-proof, made by Pontifex & Wood (next to Victoria Station) for 18s. 6d. It has two divisions, one of which will take a quarter imperial board and a portfolio, as before described, while the other will contain your things for a stay of one or two nights. It has, as before, two straps with a handle and buttoned flap; and also loops in case you prefer to carry it as a knapsack. It should contain—1st. A water-colour case, holding a short box of twelve paints, a small water-bottle, and a pocket for tubes of colour; 2nd. A 33-ft. tape, and a small ball of twine with a lead plummet for measuring greater heights; 3rd. A short spirit-level, most useful in getting certain heights, as of bases, &c.; 4th. A pair of callipers of wood, opening to 2 ft., useful to take the diameter of shafts and other things otherwise very troublesome to measure; 5th. A pocket-case of instruments; 6th. A box of twelve pencils, B.S. Cohen F being the best for all-round purposes. So much for the architecture. Then a hand-size hair-brush, short comb, razors, strop, soap in case, short clothes-brush, small box of matches, and flannel night-gown. You will also find that you can get two white shirts, collars, and a pair of socks in the other division on occasion.

Now the reason why you will want a quarter imperial board as well as a half is that the half is mostly for use at the hotel for drawing out what you have measured, and, secondly, that there are many short excursions, of one to two nights, to be made from a centre point where you would leave your other two packages. Consequently, I consider this No. 3 as indispensable in any trip, short or long.

Now for the fourth package: This is a rug, coat, umbrella, and two measuring rods in a case, made up into a roll with rug straps.

The author then went into various suggestions as to clothes to be taken, &c., concluding with the recommendation:—In luggage the thing to aim at is to have only the absolutely necessary, and what occupies space are generally things which, if we exercised a stricter supervision, we should leave behind. After a time you will know exactly what you want, and will be able to get ready for a journey at a few hours' notice, and yet go away without leaving the indispensable behind.

After luggage, the question of money is of the first importance. It may govern your route to an extent that will surprise you, and your stay at any place may be either cut short or made unduly long by the difficulties of obtaining supplies. Having tried several plans, I consider, on the whole, that Cook's or Gaze's 5*l.* or 10*l.* forms are better than letters of credit on a private bank, simply because their list of agents is more complete, and contains the places you most want to visit, whereas the agents of the private banks are mostly at modern centres of commerce, which are not what you travel to see.

At your bank you will be told, probably with a patronising smile at your ignorance, that their credit-notes can be changed anywhere, a pious delusion which one wishes they might have to experience for themselves. Not only will you experience a most distrustful reception in tendering such paper at other than the accredited agent, but the branch office even of a credit society, many of whose other offices are given in your letter of indication, will decline to pay unless the name of the town where their particular office is situated is given in the list. This sounds incredible, but has happened to me more than once. Consequently, study your letter of indication, and note the towns having agents, which you will pass, and arrange to take in your supplies at intervals.

Moreover, in France, and still more in Spain, out of the larger towns, and sometimes even there, the banks are very shy, and raise great difficulties if your papers are not exactly correct. Consequently, it is a very good plan to go to the bank soon after arriving, so as to secure that you will be able to command your money; and if there should be any difficulty you will have time to write to a head office or to London in order to overcome it.

Remember that you will be absolutely helpless if you have no money abroad; the smiling countenance of your *maître d'hôtel* will become black as night, and everywhere you will find yourself suspected. Happy indeed you will be if you find some countryman who will risk a loan to carry you to some other town. And so, if you meet any other Englishman in such a plight, endeavour to assist him, as you hope to be assisted some other day.

If you decide on private-bank letters of credit, observe whether they are payable at sight or not, because I have had some at seven days' notice, which made a local office propose that I should wait twelve days before I received the money, being the time to write to Paris, seven days' delay, and time to write back. A very cheerful prospect if you should be in an uninteresting place!

Remember that you will probably stay longest in small places, where English notes are almost unknown, and the plan of carrying five-pound notes, which may answer in Italy in such towns as Pisa, Genoa, &c., will be disastrous elsewhere. A good hint I can give you is to carry a few sovereigns in a watch purse as a reserve, as, at a sacrifice, you will, I think, be able to change them anywhere.

Well, then, having your letters of credit all right, and having found the agency, you are in presence of a difficulty, and that is to obtain the full value of your money. Your paper states that you are to be paid in the local currency to the full value without deduction. Moreover, as you have paid in gold, and the notes are payable in gold at London, there is a profit to be made on the exchange, and you are entitled to the market quotation of the day. Consequently, in France you ought to receive 25 francs to the pound, plus a premium of 3d. or 4d., according to the market, but which generally amounts to 2s. 6d. on 10*l.* Now, as the agents can always wait a rise, there need be no scruple on your part in exacting the full value of the day on the plea that they are entitled to something, as you may be certain they will not lose; in fact, I doubt if you will ever get your due. I can, I regret to say, only recall one agency where I have received the full without asking, even in the most reputable houses, though I can remember many battles on the subject. In fact, I confess I have got tired of fighting, and have now and again submitted to the loss, and even to an absurd deduction for receipt stamps.

But as many of you are men-of-war, you will do a good service to the weaker brethren by insisting on your rights, and may also flatter yourselves that you are asserting the superiority of English currency.

Of course, in Italy, Spain, and countries with bad finances, you will get very much more than 25 francs to the 1*l.* As I said before, it depends on the market.

Now, before you start, change at Charing-cross, say, 1*l.*, so as to be able, during the journey, to pay goods, porters, &c., in local value, as they will only accept English silver at a loss; and do not, by the way, take English 2½d. stamps with you to send home your letters with, as sometimes happens. In Italy and Spain at present there is practically no gold in circulation, but as the paper notes have a forced currency that will not matter. You must take your chance as to these notes, since you can hardly hope to know good from bad without much practice.

With regard to the amount you must take, the expense of travelling is no doubt always increasing, and in estimating regard must be paid to the length of your tour and the plan you have in view. Sightseeing-travel is the expensive method, and the further East you go the more it is so. France is dearer than Italy, which is the cheapest country I have been in. A short tour is also much more expensive relatively, because the initial price of the ticket out raises the average daily price. You ought especially on a first tour to keep exact accounts and to average your expendi-

from time to time, because you thus learn what constitutes the chief expense in travelling, and how you can best reduce the average. It is very difficult to compare the relative expenditure of students, because everything depends on the style. You can spend any sum, as some Americans, who get through extraordinary amounts for what they do, and see.

Long stays have an important influence on the average, because such items as hotel tips, porters, buses, sacristans, &c., which bring up the average enormously, when moving about rapidly, become relatively unimportant, and of course you can make better terms at the hotel.

Well, subject to these considerations, here are some figures of probable cost: nine months, extending as far as Athens, 150*l.*; six months France and Italy, 100*l.*–110*l.*; three months, 60*l.*–70*l.*; two months, 40*l.*–45*l.*; a month, 25*l.*–30*l.*; three weeks, 20*l.*–25*l.*, &c. All these assuming you go some distance away from home.

These figures involve comfortable travelling, second class on through journeys, good and fair hotels, photos and occasional excursions, a drive now and again, newspapers, cafés, &c., but mean that you must know something of the language for the longer tours, and that you must make some stays of three weeks to a month in smaller places, where you can live for 5s. a day. Of course, you will be told of record cheap tours, but remember this, you go to work, and work on bad food in badly-drained hotels may mean fever, which is decidedly not economical. I have read accounts of tours where from the remarks made as to weather, people, &c., I have been certain that the writer was suffering from over-cheap travelling. Again it is a mistake to sacrifice your pleasure to unreasonable economy—I mean by omitting an occasional excursion or other semi-amusement on the score of expenditure, because you will find, in your subsequent recollection, such outings form the most pleasant features of the trip. But if you do make such excursions, see that you have the means to do the thing properly. One sometimes sees people abroad do such things in a shabby way, instead of omitting them altogether.

Start your tour with extreme care in your accounts and expenses, as, until you have gained experience, you will waste a great deal of money, and will thus load your average unduly, and it will take much economy to counterbalance it.

A good plan is to make up your accounts on leaving a place, including the ticket to the next place, and the hotel bill, tips, &c., just paid. Reckon up your balance in the train, and note the amount and hour; then, by deducting from the similar statement on the last departure, you can reckon the number of days and the amount spent, which will give you your average.

Mr. Anstey, in *Punch*, under the title of Travelling Companions, has given a good guide to this subject to those who can see the moral. I have only to add that, in my opinion, Scott's advice never to go with laymen, if you want to work, is sound, for, as he says, when they have finished a place you want to begin.

I think, too, that some similarity of age is advisable as well as previous acquaintance, because we all go through certain stages of beliefs, and you will, in the abundance of your time for talking, infallibly discuss, not so much what you are seeing, as general theories of art, and to have to refute your cast-off enthusiasms in the person of a younger companion may be salutary, but is somewhat wearing.

Bear in mind what the Master of Ballantrae said to Captain Bourke when setting out on their memorable journey, "Either let us agree to bear all things at each other's hands, or else let us part at once." As to travelling alone, no doubt it procures unanimity, but I question if it is not better to bear all things rather than to be too much alone. The great advantage from the point of view of an artist, that concentration of mind is essential to the receipt of impressions, when sight-seeing; and, in working, you have the advantage of being free to undertake things that require time, knowing that you can go, or stay, as you please. France, from the generally genial character of the people, and Italy, on account of the greater number of tourists to be met with, are the best countries to travel alone in, but do not do so in Spain, on account of the long, uninteresting journeys that have to be made from town to town, and the not very sociable character of the people, for a really good knowledge of Spanish is required by those who would mix with them. Travelling with another is a drawback to learning the language, without question, and, to some extent, it prevents your seeing so much of the country and people; but, on the other hand, if you have a friend to go with, excursions on foot, or otherwise, which you would not make by yourself, are more feasible, and this especially is the case in those which are made for the sake of the scenery, when absence of work to do might make the solitude too much felt.

It is hazardous to rely on finding someone abroad, as you will generally find the parties already made up, and fellow students are not often met with except in certain of the larger centres. It is an interesting chance if you should be able to travel with a foreigner, especially of your own age, and leads to a rapid progress in French, which is probably what he will speak.

[The author's remarks as to hotels and living abroad we must omit, as they have no special reference to architectural travel, and we cannot afford space for them here; and must proceed to the portion of the paper which has special bearing on the work of the architectural tourist.]

Concierges and sacristans should not be ignored, and according to the country should be their treatment. In France they are very powerful and often troublesome; in Italy and Spain remember that attempts to postpone your visit to their customary "to-morrow," may be met by saying that you are leaving to-morrow, or to-day, as the case may be, when the loss of the prospective tip may be found to be effectual in removing difficulties. In Italy the direct negative is generally to be met by persistence, as it is often due to the desire to avoid trouble, while a courteous and hesitating negative is likely to be final, as it is generally a polite preface to a refusal. There is always something of the actor about the Italian, as you remember that the Pope, when being stormed at by Napoleon the Great, was heard to mutter "Comedian," and a desire to avoid giving offence is often an explanation of the small comedies which they may put upon you. Once in a museum, I was going round with two Italian students and the assistant curator, and, being desirous to examine an object in a case, asked to have it opened. The assistant was most polite, he thought it was not possible, but would go and inquire of the chief. On his return, one of the students asked, as I was not supposed to know Italian, "Why did you go? Would the case have been opened?" to which the assistant frankly replied, "Oh no, but he is a foreigner?"

It is a good plan not to alarm a sacristan or concierge by going with a big board and apparatus, as if you were going to be a long time at work, but rather to begin quietly at first until they have got used to you. The thing is simple enough—no average man wants to do more work than he need, or to be put to much trouble, and the aim of the average sacristan is to run through as many visitors, and to receive as many tips as possible during his working hours, and hence popular show-places are the worst to work in, the artist, and especially the architect, being a troublesome intruder.

I think you will do well to ascertain the hours of the attendants and to conform to them as much as possible, and when going round in a party in the regular official circuit of a show building, you should, I think, in politeness, keep with the party, and on its completion ask for permission to make further study. In this way you may obtain, as a favour, what would only be obtained, by force, with much loss of time and temper.

Introductions to architects and others abroad are very pretty things, and sometimes interesting information is obtained from the people called upon, but remember, firstly, you may have no end of trouble in finding the addresses in a strange place; secondly, in calling the best hours of the day will have to be employed, and, thirdly, the interviews themselves may take up a disproportionate amount of time. They should not be used by those who are not at home in the language of the country, and it is no easy matter to converse on all the subjects that will be raised, for it is extraordinary how other topics will creep in, especially in the south, and to listen to their views on English policy will be calculated to reduce you to despair.

The Royal Institute of British Architects travelling card, the Academy bone, and, lastly, the Architectural Association membership ticket, will be found of service as credentials when applying for leave to draw and as proofs of your profession; the Royal Institute of British Architects card, however, is not well got up; it compares most unfavourably, for impressiveness, with the 3s. 6d. Government passport which anyone can get. Moreover, the face should be in the language of the country, and not the back, as suspicion is caused by the request to read the back, and the presence of other languages there also is not favourably regarded. An adapted copy of the Government passport, and one for each country, would be the best thing to give students. The letter given to prize students is, however, favourably received, as though it is only in English, it is big, and looks official. With it you are taken for a student sent by the Government, for the English private enterprise is not understood in countries where the State does most things.

Permessi are a modern invention, a plague of officialism on the field of art, and an ill-considered method of compensating, by State action, for the personal care of the owners, now dispossessed, of their churches. The most justifiable and useful *permesso* is the free pass at Pompeii, given at the Naples Museum to all who are students, and which frees you from guides and the entrance fees, rightly enforced on tourists. Next comes the one to be obtained at Florence, which also gives you the right of a free entry to certain museums and old buildings, but which, like many others, does not confer that freedom of action as to measuring, and architects' work which can best be obtained, as a rule, where the priests and monks still are in possession.

At Rome there are no less than three authorities, first the Royal Government, in the Via Ripetta, to obtain a *permesso* from whom a letter from your Consul is necessary, stating that you are an artist, the Royal Institute of British Architects' card not being considered sufficient; secondly, the municipal authority, who have control of the Capitol Museum, containing some fragments of architectural detail; and, lastly, the Papal authority, for the Vatican Palace and Museum, who must be applied to a few days in advance, and whose form does not include leave to measure. The Vatican is the most expensive building in the world, I fancy, to see over, as at each door a guardian expects something. Go, therefore, provided with plenty of copper. It is also of little use to apply to see parts, of interest to an architect, which are not shown to the public, unless you can command influence with the authorities.

In other places, as a rule, do not apply at all for permission, as it wastes so much time. I made five to seven fruitless calls on an architect—I believe connected with our Institute—and eventually failed to obtain permission to examine, from a scaffold, some work in which I was specially interested. In churches and convents observance of the hours of openings and shutting, and taking care not to be in the way of services, will generally suffice to prevent your being interfered with, and will, where there are no officials in charge, as a rule, suffice, as the priests and monks are generally well disposed to artists, and they will often lend assistance in a way that no official would dream of doing. The worst places are show churches in big centres, for the sacristan's whole ambition is to pass through as many persons, representing tips, as possible, and an artist who hangs about, and pays little, is regarded as a nuisance. In Rome you may have to resent their action, and the best answer as to what you are doing is to say, "Is not the church open free to all?"

As to working in churches, you need not be afraid to work if a service is going on, provided you are not in the way, or in too conspicuous a position, and provided also that during Mass, or Benediction, you pay some attention to the bells so as to cease from working at moments when reverence is required. If, however, it is a feast day, or the church is a specially fervent one, this will not apply, and you will, of course, stop at once on being asked to do so, which will create a good impression and facilitate your work another day. Continental ideas of the use of a church are, as you will soon find out, different from our own; there is more of the public place, museum, and temple, than of the meeting-place, to be occupied only for so many hours a day or week; very likely you will prefer your own ideas, but need not any the less observe these while there.

I cannot see that difference of opinions can be justifiably translated into outward conduct in foreign churches, especially at service time, and nothing more is expected of anyone than an inoffensive neutrality of a ttitude, especially necessary when the chief places are taken by our ardent sightseers, intent on putting through a function.

If a cantankerous sacristan should refuse permission to draw and refer you to authorities it is not always well to hunt them up, because of the loss of time, difficulty of finding them, of making yourself understood, and of working in face of opposition when leave has been obtained.

Continued on page 427.

Illustrations.

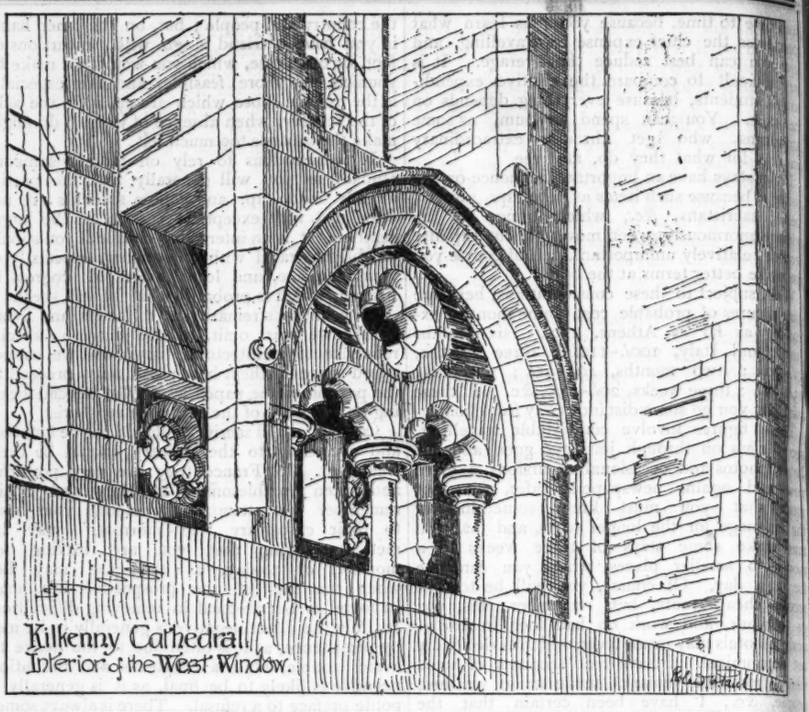
KILKENNY CATHEDRAL.*

THE Cathedral Church of St. Canice, Kilkenny, is one of the most interesting of the buildings of its kind in Ireland, and has suffered less from restoration than most of the other Irish Cathedrals of its size and importance. The present city of Kilkenny consists chiefly of one long winding street, with many of the old houses still left. At one end of this street stands the Castle, at the other (or north) end is the Cathedral of St. Canice. Parallel with the main street runs the river Nore, and both the Castle and the Cathedral are well situated on high ground above its banks. The connecting street is also partly on high ground, but northward it is considerably below the level of the churchyard, which is approached by a very steep flight of steps at the south-east corner, the lofty round tower making a picturesque feature in the view obtained from the bottom. On ascending the steps and arriving at the churchyard door the view of the south and east sides of the Cathedral are here seen, with the strongly marked vertical lines of the round tower, contrasting with the equally strong horizontal lines of the main building. This view is the one chosen in the plate—it is undoubtedly the most picturesque and interesting view, and is rarely, if at all, the point from which photographs are taken on account of the difficulty of getting to a sufficient distance from the buildings.

The present Cathedral appears to have been founded by Hugh de Mapilton, Bishop of Ossory, 1251-1256. There had been, however, an earlier building on the site, evidences of which were found on either side of the present choir, and from the position of these more ancient walls, the building must have been of considerable size. Two fires are recorded in the annals of the Four Master, one in 1114, when the church then existing was burnt by the Irish chieftains, and before that in 1085, "Ceall Cainnigh was for the most part burned." The round tower at present existing carries us back again in all probability to the eighth or ninth century, and the skeletons and burials found both underneath the foundations of the tower and within its area, show that this spot had been a place of sepulture at a still earlier period. The See of Ossory was indeed founded early in the fifth century, but at Saighir, "by Chiarain, son of Lughaidh, of the family of the chieftains of Osraighe," but it was at a later period (1052) removed to Aghaboe, and it is not until 1251, as before stated, that the foundation of the Cathedral as it now exists seems to have taken place, although the See might have been removed to Kilkenny at an earlier date. The plan, as will be seen by the large ground-plan given to-day, is a very symmetrical one. The nave is of five bays, with aisles and a boldly projecting south porch. The transepts are aisleless but have eastern chapels, that on the north retaining its original form, while that on the south has been considerably lengthened at a later date. The structural choir east of the four great piers of the central tower was of considerable length, and had aisles on either side for rather more than half its extent. A porch has been very recently added in the angle of the choir and south aisle, but this is omitted in the view, although shown on the plan.

The general character of the exterior is one of severe simplicity. The nave has a clearstory of large quatrefoils—one in each bay—with two light windows in the aisles and a triplet above a double doorway at the west end. The triplet is flanked by octagonal turrets with stone pyramidal tops, and there are smaller turrets at the angles of the aisles, that on the south containing a staircase. The western triplet is peculiar, the sill level of the centre light being kept higher than those of the side-lights. In this space a panel containing three cusped circles has been introduced, which is curiously treated inside, and forms one of the most interesting features of the interior. (See sketch.)

The western doorway is a very beautiful piece of "Early English" work. Two doorways, with a quartrefoiled circle above, are enclosed by a richly moulded arch, with carved foliage caps. The circle itself contained sculpture—possibly the Virgin and Child—and on either side are smaller circles, with angels kneeling in the act of adoration. In the gable over the triplets is a circular window, the inner order cusped.



Kilkenny Cathedral.
Interior of the West Window.

The large windows of the clearstory are single quartrefoils, of two orders of chamfers, with a continuous hood-mould. The aisle-windows are of two-lights, with a quartrefoil above, in "plate" tracery, the whole enclosed by a hood-mould. At the third or middle bay of the nave on the south side is a fine porch, gabled, of nearly equal height with the aisles. The outer archway has some delicate mouldings and carved caps of similar style to those of the west door, and in the gable is a quatrefoiled circle. The nave has the embattled parapet stepped in the usual Irish manner, but the present parapet of the aisle is a modern addition; doubtless it was so originally, but the aisle in the south-east view, given in Messrs. Graves & Prim's book on the Cathedral, shows a simple eaves-gutter, without a parapet. The old parapets project slightly, and are carried on a corbel-table of simple design. The transepts, north and south, are almost identical in design. Their dimensions are about 40 ft. in length and 28 ft. in width. At each end is a pair of lancets, with a cusped circle above. On the west side is a smaller pair of lancets. The east wall has no windows, but in each case an arch leads into the eastern chapels. The south transept has a staircase in its western wall enclosed in a square turret with a saddle-back roof forming a picturesque feature on the exterior. This staircase leads by a passage in the thickness of the wall to what is now the ringing chamber of the tower. The tower, which at present is only one story in height (its parapet just clearing the roofs that abut against it), was undoubtedly of two stories originally. Like many central towers in England, it fell, and did a large amount of damage to the choir. This was in 1332. It is to be observed, however, that the parapet stands on a string-course, and does not project like the other parapets on a corbel-table, and this in itself would seem to prove that the present finish of the tower was only intended to be temporary. In the view of the Cathedral before referred to in Messrs. Graves & Prim's book, a low conical slate roof is shown on the tower. This has been removed, and a low belfry chamber has been constructed in such a way that it is hidden, in all near views of the tower, from view. There is a stair-turret at its south-west angle, and four stone shoots throw off the water on to the roofs of the nave, choir, and transepts. The other roofs have rain-water pipe heads at the corbel-table level with down pipes held to the wall at intervals by stone bands.

The Lady Chapel, which was built eastward of the south transept, on the site of a chapel similar in dimension to that on the north (known as the "Parish Church"), is an important feature in the south-east view of the church. It is, of course, later in date than the transept to which it is attached, but the simplicity of its windows on the south, and the "plate" tracery of the fine group of windows at the east end, are of comparatively early date. The windows on the south side are composed of three groups of triplets, a simple chamfered jamb with a plain roll over as a hood-mould. This section is common to most of the windows both of this chapel, and of the choir and its aisles, and gives evidence of the amount of effect to be derived from the use of the simplest mouldings. The east wall has a group of three windows, each of two lights with a quatrefoil in "plate" tracery in the head. The hood-mould in this instance is separate for each window. At the time of Messrs. Graves and Prim's book (1857), the central window on the south side was blocked up, and the mullions and hood-moulds of the east window were much dilapidated, so that in these particulars the features are restorations. On the south wall, about midway between the lancet and the eaves course, is a small head projecting. Its use, however, does not seem clear. A buttress of the same type as at the angles of the transepts and choir, is placed at the south-east angle of the Lady Chapel, and provides a strong support to the walls of the building, which are otherwise so much cut up by the windows.

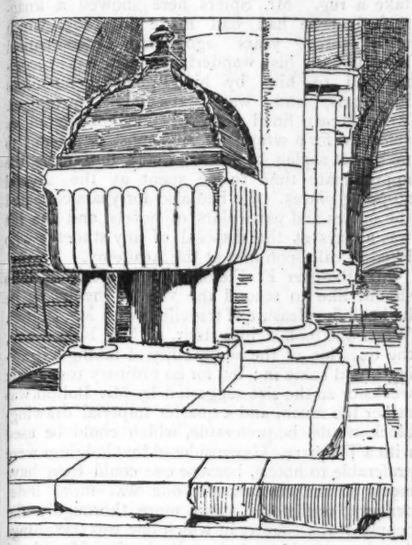
The Lady Chapel is about 11 ft. shorter than the choir aisle, and one of the lancets in the south wall of this aisle still shows. The second shows inside, and the original scheme of lighting this aisle can be completed by reference to the corresponding north aisle, which still retains its windows. The aisleless portion of the Presbytery projects 30 ft. beyond the ends of the aisles, and is lighted on either side by a fine triplet of tall round-headed lancets. A triplet of pointed lancets, with a cusped circle in the head, lights the east end. These windows were formerly filled with coloured glass, and in the course of excavations made in 1846, fragments of this glass were found, together with the traces of the fire into which, on its destruction, most of the glass and lead had been thrown. A few of these fragments are given in Messrs. Graves & Prim's book, and were pronounced by Mr. Winston to be of fourteenth-century date. The glass was put in by Richard Ledred, Bishop of Ossory, 1318.

With the exception of the difference in planning east of the crossing, and the absence of a projecting porch to the nave, the north side of the church may be said to be a counterpart of the south. There is a doorway in the nave wall opposite the south porch and another in the north wall of the north transept.

The interior of the church is most impressive. The main lines of the architecture are simple within as without. The quatrefoil—a much-repeated feature throughout the building—occurs again in the nave piers, which are somewhat short in the shaft, with bold mouldings to cap and base, and carry moulded arches of two orders. The quatrefoil windows of the clearstory

* The series of the "Ancient Cathedrals of Ireland," which was begun in our issue of April 7 last, is concluded in this number. The series of the "Abbeys of Great Britain" will be resumed next month with illustrations of (No. II.) "Rievaulx." (No. I.) "Westminster" was given in our New Year's number, January 6, 1894. Particulars of this and of the three Cathedral series ("England and Wales," "Scotland," and "Ireland") will be found on page 436.

have deeply-splayed sills in order that the light shall be thrown downwards. At the west end is the curious passage behind the east window, already alluded to and illustrated, and in the second bay of the south arcade from the west, immediately west of the column, is the font, of the same date as the church, consisting of a square fluted bowl standing on four columns and a central drum, and raised on two steps (see sketch). Fonts of similar pattern are to be found



in St. Mary's Church, Kilkenny, and in the parish (formerly collegiate) church of Gowran, in the county of Kilkenny. The cover, of wood, is of late date. In the nave are a very large number of monuments and incised floor slabs. Eight tombs are shown on the plan. The three on the north, beginning from the west, are (1) to James Schorthals, Lord of Ballylarcan and of Ballykif, and his wife Katerina Whyte. He caused this tomb to be erected in 1508, and on it is a recumbent effigy of the deceased in armour; (2) Sir John Gras, Baron of Courtstown, and his wife, 1552; and (3) an altar-tomb commemorating Adam Cottrell and members of the Lawles family, dated 1550, and later dates to and including 1600. Those on the south side, also beginning from the west, are (1) a plain altar-tomb to Bishop Hacket, Bishop of Ossory, died 1478, and to Nicholas Hakhed, formerly Burgess of Kilkenny, and others; (2) an altar-tomb with effigy of Honorina Gras, who died 1596; (3) a sixteenth-century female effigy on an altar-tomb, an interesting example of costume; (4) Richard Butler, Viscount Mountgarrett, who died in 1571, an effigy in armour, with the sides of the tomb sculptured in low relief with the emblems of the Passion, the initials R.B., and a shield bearing the arms of Butler and Fitzgerald quarterly; and (5) the tomb of Reverend Father Nicholas Walshe, formerly Bishop of Ossory, died December 14, 1585. This is a plain altar-tomb with a marginal inscription having some good lettering. We give here (see sketch) the commencement of the

inscription. Besides these tombs are a highly-interesting series of floor slabs with crosses, emblems, and inscriptions. For a detailed account of these we must refer our readers to Messrs. Graves and Prim's book,* already quoted in this article, and from which, and also from the guide to Kilkenny by Mr. R. Langrishe, a large amount of the information in the present article has been obtained, besides notes made on the spot.

In the south transept are three more tombs, shown on the plan. That nearest the south wall is supposed to be that of James, 9th Earl of Ormonde—an altar-tomb with an effigy. Next to it is a very fine altar-tomb with effigies of Piers Butler, Earl of Ormonde and Ossory (died 1539) and Countess Margaret Fitzgerald. The third tomb is one of modern date (1854), in Caen-stone, and commemorates John Butler, second Marquis of Ormonde.

In the north wall of the transept is a monumental recess, and on the north side of the choir between the organ and the triplet, a fine effigy, supposed to be that of Bishop Ledred (1318), who placed the coloured glass in the choir windows (see *ante*).

In the south wall of the north transept chapel is a curiously-shaped aumbrey. The head is not arched, but "stepped." The Lady Chapel is now used and fitted up as a chapter-house, and the south aisle of the choir is a choir vestry. The old stone screen under the eastern tower arch has been removed, and the present fittings of the choir are modern. The wooden roofs also are new throughout—the tower vaulting only being ancient, of Bishop Hacket's time (1460). A remnant of what might be part of the old stone stalls of the choir is now in the north transept, and is known as "St. Chiarain's Chair." The seat is modern, but the two arms are ancient.

The round tower is detached from the Cathedral, and stands about 9 ft. away from the wall of the south transept. It is 100 ft. high, with a diameter of 15 ft. 6 in. at the base, and 11 ft. 2 in. at the level of the uppermost windows. It was divided into eight floors, and originally was finished with a conical roof. Traces of put-log holes remain inside, which seems evidence that the tower was built, like a modern factory chimney, from the inside, scaffolding only being used for the portion near the ground and for the roof.

There are still lying on the north side of the churchyard several fragments of tombs of late date similar in character to those in the nave and south transept. A large number of these altar-tombs seem to have been made at the same period. The materials used in the construction of the Cathedral are local limestone from the immediate neighbourhood for the walling, and sandstone for all the dressed work.

* "The History, Architecture, and Antiquities of the Cathedral Church of St. Canice, Kilkenny." By James Graves and John G. Augustus Prim.

DECORATIVE PAINTINGS FOR THE HÔTEL DE VILLE, PARIS.

WE give reproductions from photographs of two of the most important decorative paintings which are about to be fixed in the Hôtel de Ville at Paris; one by M. Bonnat, "Triomphe de l'Art," now in the Champs Élysées Salon, and intended for the Salon des Arts at the Hôtel de Ville; the other by M. Puvis de Chavannes, "Victor Hugo offrant sa lyre à la Ville de Paris," now in the Champ de Mars Salon, and intended for the staircase of the Prefecture. They are further referred to in the first article in the present issue.

THE ARCHITECTURAL ASSOCIATION.

Continued from page 425.

If the sacristan cannot be overcome by persuasion, or a bribe, it may be wisest to go on to another place. In Spain, however, the priests seem to have a greater control over their officials, and I have found them most favourably disposed to students regarding leave to draw as a matter of course, which is our view of the question. I often pity the poor foreign student who comes, if he ever does, to England to work, where the making of drawings seems to be considered as a deduction from the value of the property, and a consequent offence, and where many parsons expect to be humbly sued by the poor artist for leave to ply his trade.

As to the sight-seeing of show places, it is of course absurd to spend time in seeing what you do not like, but until you have seen it you cannot know what it is like, excepting by analogy, *i.e.*, from having seen similar places, and then you will be very likely less inclined to omit the regulation visit, perceiving that there is some advantage in having seen what the average man sees, and what he will talk about, if the subject should be discussed.

It is a saying of Goethe's that you will only find in Rome what you take there. Many places owe their attraction to associations historical and literary, and the charm is absent unless one has some previous acquaintance with them. On the other hand, seeing such places is a powerful motive to reading, giving some actuality to the dry pages of history.

Advising students what to see is risky, because they may miss the point of interest for which the particular building is valuable, and may then fall foul of your judgment, as in the case of old buildings, now encased in bad detail, which are only to be realised by the skilled observer.

As to the time to spend in travelling, there are two plans—the rush round, and the long tour—which both have their uses, and are better not mixed. A rush round should be short, say three weeks, and should cover all the important places in the country, so as to gather a general impression of its art, and an idea of what class of work you will take up, when you come back again, and it is better to attempt no work at all.

I am all in favour of the long tour; the rush round I regard as a useful preliminary, and certainly better than none at all; but a country cannot be studied, as it is, without a residence of some length, and without the exploration of its smaller towns. A brief tour gives one a better knowledge, in one's own opinion, of the country than a longer one, when one will feel that one knows nothing, so many are the aspects, and causes, that that can be dimly seen, beneath the surface.

When I made my first rush round Italy it was spring time. Florence was all wind, and Venice all rain. The lilac only was out, and fields were bare. Where, I wondered at the conclusion, was the Italy of poet, and of painter; and I resolved that next time I would go through the summer and autumn in the country. This I regard of great importance. A hot country must be seen in the hot season to understand it, and to appreciate it at other seasons also. Heat can always be supported by observing the customs of the people, which are the results of centuries of experience.

From an architectural point of view the long tour is even more desirable, because important things can be undertaken, which would not be worth doing in a hurry, and in our work the details have often a great influence on the scheme. Moreover, towns and villages that are not worth visiting, in a rapid review, are worth seeing when time is less of an object, and then we can see what a style means in its smallest work, and often how it originated.

Previous to over-running a town consider its history, for towns grow like trees, in successive layers, and street improvements are not a modern invention; thus at Rome, the work of Julius, along the Tiber, contains interesting work of the architects of his age, no other than Raphael and Bramante. Avoid suburbs and outskirts of towns, except where you have reason to expect that churches, once in the fields, have been engulfed in them. Sight-seeing is fatiguing, and over-walking should be avoided. The long streets of Paris are a great snare to enthusiasts who fail to realise the distances.

On a long tour, when visiting a town, it is best to devote the first day to going round, and it is a good plan to do this with your companion, as there is economy in sharing the fees, and it is generally advisable to make the regulation visit round the chief buildings, and often to ascend the towers, or to the roofs, both for the sake of the curiosities of their construction, and to get an idea of the city as a whole. When doing this first day's visit you should note down what appeals to you most, forming a programme of work, which you may, or may not, be able to complete, before you have to go on. You can also, thus best arrange with your friend, as to the duration of your stay, by each alternately making concessions.

Sight-seeing is education, but not study; sketching is practice in perspective; it is in measuring up that the special work of an architect consists.

That would seem to be most useful, as study, that most closely resembles your daily work, work therefore, on your usual papers, with usual pens, pencils, and colours. One would say that you will best provide against disappointment if you represent your new work in a similar style to that in which you have drawn the old. And it has often been said before that, while a painter's picture is his finished result, that of the architect is only a means to an end, the building being the product by which he is judged. I confess to a fancy, however, that there is a value in a rough style of drawing, for effects, which would shock the conservative, assuming that it is merely supplementary to sound elevation, plan, and sectional drawings. In the result, much of architecture is due to the sun, and the value of a

photograph is often that of its light and shade. I do not desire, however, to enlarge on this topic, for precept is one thing and what is successful is another, and I could only expect you not to blame me, in the result, if you had been following your own bent, which is the best advice that anyone could give—the pursuit of a method to its logical end is the truth, or reason, of many men's achievements.

Sketching is supposed to be a matter of instinct; hints are generally more wanted as to materials than as to methods; in measuring, however, there are certain difficulties which one may fairly expect to have explained. There are practically two ways of drawing buildings to scale, the first the old "measured sketch," which is a ruled elevation to scale, set up from measurement of the lower, accessible, portion of the building, what is not to be got at being put in by proportion to what is known. The other method, the measured work proper, is drawn out, not necessarily on the building, from sketches of every feature with its measurements attached, the drawings being, as it were, built up from the various details of the building. The best way to go about the latter method is to rule a diagram of the front on a block of, say ¼ imperial size, on which your main dimensions will be put, and then to sketch all the various features on sheets of the same size, so that you can keep them all pinned together, for reference. Good measuring could be drawn out by anyone, a standard of perfection I do not claim to have reached myself. The greatest difficulty is to get the key dimensions without unnecessary measurements, which serve only to obscure and confuse your work. As to ladders and scaffolding they cannot generally be obtained, and ingenuity has to supply their place. Much can be done by measuring from above, from the parapet or cornices, from one level to another, and from window to window sideways, and up and down from a window to strings and so down to the ground. In one drawing exhibited, the problem was to obtain the total height of a building, which was a mere shell without any upper floors, the façade being a smooth stone wall, the top of which was inaccessible. Eventually it was done by slinging a plummet, at the end of a string, right over the top, and drawing up the tape, then attached to it, until it touched the underside of the top fillet of the cornice. The total height was thus obtained as well as the projection of the cornice, the height to its underside being ascertained by means of an unfinished cross wall, the top of which was nearly level with some circular attic windows. To get on to this cross wall a rustic ladder of insignificant height was only available, but there happened to be a fireplace in the wall, and as the ladder could be safely placed upright in the recess, and as it is easy to pull yourself up out of a hole, if you can get a hand on its rim, the flue proved a possible method of ascent. Thus the attic windows were measured, the height of architrave and frieze, and various other details obtained. Spires and tall roofs can be obtained by some methods given in the "Architectural Drawing-Book," but the best way is to climb up inside, as there are generally pieces of wood, nailed on to the central posts, in the case of timber work.

I admire, myself, those who do not omit the difficult and tedious work of projecting the corbels of a cornice on a circular part, or the correct setting up of tracery, or those other points of drawing which appeal only to the skilled observer. Arches and vaulting are also not so difficult to measure as they appear, and you should copy out of Spiers' work the methods of doing them, to take with you until you are efficient in them.

It appears to me that there are things which are worth measuring in a diagram style, for the sake of the proportion and outline, rather than of the detail; and, in these cases, it is surprising how quickly, by practice, such examples can be measured, so as to be drawn to one-thirty-second, or one-sixteenth scales. You will need only the key dimensions, one pillar, or pier, for the plan, and the general heights only, for the section or elevation, and can put in the detail of the style as you like; but such work should, of course, be distinguished as a measured sketch. Measured work is so laborious that it is not surprising that cheaper methods are common, but the putting of dimensions on to a sketch is not, to my mind, of the value usually ascribed to it; the proportions are not to be obtained thus, and, as a rule, such dimensions are inadequate, if you try and draw out the work; while the possession of old work, to the scales you are accustomed to, is of great value. What architects differ most in, is the number of features that can be crammed into a façade of a given length, and how can scale be learnt save by experience of old work?

In conclusion, the advantages of travel are questioned mostly by those who have not been abroad, and a chance of going modifies much our views of the subject. Anyone will admit, of course, that why the advantage is often little, or none, is due to the spirit in which it is undertaken. No one can be taught against his will, and an atmosphere of prejudice will prevent any man learning the most obvious facts. The value of going more than once lies in the fact, that the first impressions are most distracting, and I think that a rush round, which gives some general idea of what there is, has a great value, as a prelude to a second more serious working tour. And I think this first rush round of the beginner should be taken much earlier, in the pupil stage, or, better still, before, as nothing should so open the eyes of the beginner as to what architecture means, as a sight of the grand buildings of the past; moreover time is not lost in this wearing off of the novelty of fresh impressions, as on a second tour work can be better done, the mind being less distracted.

From other points of view, it must be remembered that we live on an island and, by imports, in art as well as in food, and this importation has been continuous, hence old work, no less than modern, is best understood when foreign originals have been seen. Canterbury choir is not less liked when you have been at Sens, nor the Reform Club when you have seen the Farnese, and only the other day I was interested in seeing Spanish features, in St. Mary's, and the Cathedral, at Bristol. Architecture is wider than nationality, which shows itself mainly in the class of building chiefly required being better treated in one country than another, and in a certain general stamp of the characteristic of each race, such as refinement, grandeur, vigour, &c., in less or greater quantities.

The greatest abuse of travel is heedless importation of features that have no previous root over here, instead of learning how to modify the old, for the work of the present. Imported work usually dies out, however fashionable it may be for a time, and a design should not require to be understood by the light of what has been done exclusively elswhere.

That there is nothing more to learn, owing to the numbers who have been there before you, is a pure delusion. It is extraordinary how the obvious is overlooked. Hundreds had seen the Town Hall at Piacenza, but when brickwork was built on granite, with no division between, it was justly regarded as a novelty; and, as Bacon says somewhere, chance is more responsible than pursuit for most of our discoveries, what is known being but a particle of what is passed over.

The importance of travelling may easily be exaggerated, but as now-a-days the world in general travels, the architect should at least have seen the more important monuments, as his client will very likely have had that advantage.

From the point of view of examinations I would prefer to spend the fees of all the courses in seeing, rather than hearing about, the buildings, and architecture, in question. If you have been at Vicenza, Palladio will never stump you, and Scamozzi, Ictinus, and others, when you have seen their works will be no burden on your memory.

The greatest, however, of all the advantages of travel is the acquirement of freedom. Every generation has, in art, as in other matters, its own cant ideas, and phrases. Travel is emancipation, in that art is wider than convention, and a knowledge of all the styles of the past is the best protection against the formulas of the day. When told of such and such mysterious qualities to aim at, and this or that method of doing it, you can reply effectually by quoting some leading building, treated on the reverse method; and if that be excluded, there will always be another, for art is wide, and principles are hard to stretch; as it has been said, the subtlety of nature is beyond understanding, so that the theories of mankind are a kind of insanity, only there is no one to stand by and observe it.

Mr. R. Phené Spiers, in proposing a vote of thanks to Mr. Bolton, said that the paper suggested very early recollections, and when he said that his first Italian tour was made in 1860, he might be looked upon by many of those present as perhaps an old hand. In many of his early tours he was a great economist, having been brought up in the French school, which, as Mr. Bolton had said, was a thrifty one. In arriving at a town, it was well to leave the luggage at the station, and, taking only a handbag, to walk until one recognised the class of inn desired. In Italy it was necessary to make one's price, otherwise the traveller would be looked upon as a fool, or as a man of means to whom price was no object. He never travelled now with a portmanteau, as it restricted freedom of movement, nor did he ever take a rug. Mr. Spiers here showed a knapsack bag he had had made in 1861, which until three years ago had accompanied him in all his wanderings. It was recommended to him by his French companions in Paris, and was extremely convenient. An overcoat lined with silk he considered as sufficient for a wrap. It was most important to make out a plan of the tour and determine the approximate time to be spent at the several stopping places. He had also for years collected the names and particulars of hotels, and the list was always at the disposal of any students who liked to call upon him at the Academy.

Mr. Banister F. Fletcher (Hon. Sec.) said he should like to second the vote of thanks, as he had had the pleasure of travelling with Mr. Bolton. When one took a long tour, as Mr. Bolton had, the question of the advisability of taking a drawing-board came in; but for an ordinary tour of six weeks or so the size suggested by Mr. Bolton was rather too much, and a quarter imperial drawing-block would be preferable, which could be used with a T-square. He considered that lodgings were preferable to hotels, because one could then have meals at the restaurants; one was more independent, and could study more thoroughly the people of the country in which one was travelling. As a late Academy student, he thanked Mr. Phené Spiers for the valuable advice he had often given to him when arranging a tour.

The vote of thanks was then put and cordially received, and Mr. Bolton having replied, the meeting separated.

THE LONDON COUNTY COUNCIL.

THE first meeting of the London County Council after the Whitsuntide recess was held on Tuesday at the County Hall, Spring-gardens, Sir John Hutton, the Chairman, presiding.

The Council Chamber.—The adjourned report of the Establishment Committee was as follows, the recommendation being agreed to—

"Consequent on the repeated applications from newspapers for seats in the reporters' gallery, we have had under consideration the question of enlarging the gallery. The architect has prepared a plan showing how the enlargement can be effected The present gallery accommodates 21 press representatives, and according to the plan submitted, increased accommodation will be provided for 10 or 12 more. From the nature of the work the architect is unable to give a close estimate, but he is of opinion that the probable cost would be about 100*l.* We think it very desirable that the press gallery should be enlarged, and we accordingly recommend—

'That, subject to an estimate being submitted to the Council by the Finance Committee as required by the statute, an expenditure of a sum not exceeding 100*l.* be authorised for the purpose of enlarging the reporters' gallery; that the work be carried out without the intervention of a contractor, and that the plan and estimate be referred to the Works Committee for that purpose.'"

Additions to the Fire Brigade.—Lord Carrington, on behalf of the Fire Brigade Committee, submitted a long report, proposing the erection of new fire stations and appliances, and the employment of eighty additional firemen. He said the Council had already expressed an opinion in favour of the idea of increasing the means of protection from fire, according to a definite scheme which had been prepared by the committee dealing with the whole of London, but was anxious that the carrying out of the proposals should be spread over a number of years. The committee's scheme involved a capital expenditure of 100,000*l.*, and an increased annual charge of 30,000*l.* for twenty years, when, as a considerable amount of the loan would have been paid off, there would be a diminution of the amount. The sum they proposed to spend in the year ending March, 1895, was only £6,000. They now asked the Council to give its sanction—(1) to a new station at Streatham; (2) to a street station pending the erection of the permanent building; (3) the fixing of five fire-alarms in the neighbourhood of Streatham; (4) to a fire-engine station at Perry Vale; (5) to a fire-engine station at Shepherd's Bush; (6) to a sub-fire station or a street station at each of the following

localities:—North End-road, Fulham, High-road, Kilburn; Strand (near the Law Courts); Piccadilly Circus; High-street, Homerton; Burdett-road, Limehouse; North Woolwich; Lee Green; Battersea Park-road; Brixton Hill; (7) to additional hose-cart and fire-escape stations or hose and ladder truck stations at Hornsey-rise; Aubert Park, Highbury; St. Leonard's-road, Poplar; and Rye-lane, Peckham; (8) to additional fire-escape stations at Wandsworth-bridge-road, Fulham-palace-road, Blythe-road, Hammersmith; Alpha-road, Regent's Park; Haverstock Hill, top of; Mill-lane, Hampstead; Malden-road, Kentish Town; Victoria Park-road; Bow Common-lane; Beresford-square, Woolwich; Burnt Ash-road, Lee; Mayow-road, Forest Hill; Lower Streatham; Loughborough Junction, instead of Coldharbour-lane, as originally proposed; Balham Hill; East Hill, Wandsworth (in the complete scheme fifty new fire-escape stations are provided for); (9) to steam fire-engines to be stationed at Notting Hill, St. John's Wood, Bethnal Green, Isle of Dogs, and West Norwood Stations; (10) to arrangements for the purchase of appliances and gear needed for the additional stations, and for enrolling and training the eighty additional men required for the duties to be commenced during the current financial year.

After a long debate the whole of the Committee's recommendations were agreed to.

Widening of Wellington-street and the Strand.—The Improvements Committee submitted a scheme for the widening of Wellington-street between the Strand and Lancaster-place to about 100 ft. and the Strand between Wellington-street and Savoy-street to 80 ft.* The report of the Committee, after detailing the previous recommendations, proceeded as follows—

"The Council on April 10 last referred the recommendation back to us for further consideration, especially with regard to the expediency of applying to this case the principle of betterment. We have given full consideration to the subject, and have negotiated further with the Duchy of Lancaster, with the result that the Duchy is willing to withdraw clause (*e*) relating to betterment from the conditions attached to the offer, upon the Council agreeing to pay the Duchy 38,760*l.* instead of 32,000*l.* We are advised that the 6,760*l.* which the Council would save by not insisting upon the withdrawal of clause (*e*) would fully represent the amount of the Duchy's interest which might possibly be intercepted hereafter by the Council if it succeeded in obtaining Parliamentary power to apply to this improvement the principle of betterment. The 6,760*l.* can therefore be taken as a recognition of the principle of betterment as proposed to be applied in the case now before Parliament, and we have decided to advise the Council to accept the Duchy's offer of 32,000*l.* and the conditions (*a*) to (*e*) inclusive set out in this report. Wellington-street at its junction with the Strand is at present about 64 ft. wide, and the Strand at this point has a width of about 68 ft. Owing to the inadequate width of the road the traffic is frequently congested, and the widening of Wellington-street is therefore, in our opinion, a necessary and urgent improvement. The estimated cost of the paving works is 2,700*l.* The widening of Wellington-street will have to be undertaken sooner or later, and if the present very favourable opportunity for effecting the improvement without any outlay for compensation in respect of leasehold and trade interests be lost, the cost at a future time will be probably five or six times greater than now, a result which we cannot think the Council desires to bring about. We recommend—

'That, subject to an estimate being submitted to the Council by the Finance Committee as required by the statute, the Council do accept the offer of the Duchy of Lancaster to sell to the Council, for 32,000*l.*, and upon the conditions (*a*) to (*e*) inclusive set out in this report, the reversion to the freehold of the property required for widening Wellington-street and the Strand, and do carry out the improvement as shown upon the plan submitted with this report; and that the solicitor be instructed to prepare the necessary agreement with the Duchy.'"

Mr. Hubbard moved the following amendment:—

"That while appreciating the efforts and sharing the anxiety of the Committee to carry out this and other improvements which are greatly needed in various parts of London, the Council, in view of the heavy and increasing burdens now borne by occupying ratepayers, and also of the impending changes in the incidence of taxation promised by the present Government, whereby land values shall be made to contribute towards the administrative expenses of the county and the purchase price of land will be greatly reduced, is not prepared to proceed further in the matter."

The Vice-Chairman urged that as full recognition had been given to the principle the Council had been so long fighting for, they should seize the opportunity to carry out what would be a very great improvement at this crowded part of the Strand.

The Council divided, with the result that Mr. Hubbard's amendment was rejected by fifty-nine to twenty-seven.

Alderman Beachcroft objected to the improvement being carried out strictly on the lines of the plans submitted, and he moved an amendment to the effect that the Council agreed to the purchase of the land for 32,000*l.* with a view to carrying out the improvement, and this on a division was carried by forty-three to forty-one.

Dr. Collins moved to add to the recommendation words to the effect that the purchase was made on the understanding that the 6,760*l.* was allowed by the Duchy in lieu of betterment.

The debate on this amendment had not concluded when the fixed hour for the adjournment of all opposed business arrived.

* See the *Builder* for March 17, p. 217, and April 14, p. 292.

COMPETITIONS.

FEVER HOSPITAL, TOOTING GRAVENEY AND HITHER GREEN.—The competition for two fever hospitals, which the Metropolitan Asylums Board propose to build, has just been decided. The first hospital is to be situated at Tooting Graveney, and will be called the "Fountain Hospital"; the second, to be called the "Park Hospital," will be at Hither Green. Mr. Alfred Waterhouse was the assessor, and the result of the competition is as follows:—*Park*, 1st premiated design, Mr. Edwin T. Hall, 57, Moorgate-street, E.C.; 2nd, Messrs. Leonard Stokes and George T. Hine, 33, Parliament-street, S.W.; 3rd, Messrs. Charles and Wm. Henman, 64, Cannon-street, E.C. *Fountain*, 1st premiated design, Mr. A. Hessell Tiltman, 70, Torrington-square, W.C.; 2nd, Messrs. Beeston & Burmester, 30, Lincoln's-inn Fields, W.C.; 3rd, Mr. Wm. Emerson, 8, Sanctuary, Westminster.

SCHOOLS, GILLINGHAM AND GRANGE UNITED DISTRICT.—The plans of Mr. M. Chambers, Chatham, have been selected in this competition.

THE GHIZEH MUSEUM.—The Cairo correspondent of the *Times* states that the Egyptian Government intend shortly to invite European architects to furnish plans for a new building to contain the exhibits now included in the Ghizeh Museum, and to give premiums to the amount of a thousand pounds for the three best designs.

TOWN HALL, THE CAPE, SOUTH AFRICA.—The first premium, 200*l.*, offered by the Cape Town Council for the erection of a new Town Hall, has been awarded to Mr. Harry A. Reid, in conjunction with his partner, Mr. Green, both of Johannesburg. The contemplated outlay, not including the upper part of the clock tower, is 50,000*l.*

SCHOOL, SUNDERLAND.—A special meeting of the Sunderland School Board was held on Tuesday to consider competitive plans for the Hudson-road School. Fifteen plans had been sent in. The General Purposes Committee reported that they had examined the whole of the plans for the school submitted for competition, and recommended that the premiums should be awarded as follows:—1st, and 50*l.* to Mr. G. T. Brown; 2nd, and 20*l.* to Mr. J. Eltringham; 3rd, and 10*l.* to Messrs. Oliver & Leeson (Newcastle). Mr. Singleton moved, and Mr. Davison seconded, that Mr. G. T. Brown be engaged to undertake the duties of architect on the usual terms. This was carried, and the meeting terminated.

BOARD SCHOOL FOR THE LANCASTER SCHOOL BOARD.—In connexion with the competition for new schools, Bowerham-road, for nearly 1,000 children, the Lancaster Board have placed first the plans sent in by Mr. Robert Walker, architect, Windermere, and have awarded the premium of 20*l.* to him. The premium does not merge into the commission. The school is planned in a T shaped form for 660 boys and girls (mixed), and 300 infants in a separate building.

SANITARY INSTITUTE.—At an Examination for Inspectors of Nuisances, held at Hull on the 25th and 26th ult., the following seventeen Candidates were certified to be competent, as regards their sanitary knowledge, to discharge the duties of Inspector of Nuisances:—Arthur Herbert Atkinson, Hull; Charles Crowther, Dewsbury; Alfred Gleave, Manchester; Henry Hilton, Blackburn; Alfred Jesse Hocken, Hull; Charles Jones, Birkenhead; William Henry Jones, Birkenhead; Fred. Jowett, Wetherby; Miss Margaret Jean Keay, Derby; Alfred Henry Kendall, Leeds; Miss Henrietta Kenealy, Watford; William Knox, Ayr; Robert Scott, Hull; John William Shaw, Grimsby; Herbert Charles Sugden, Bingley; Roland Arthur Thomas, Menai Bridge; John James Warrington, Elland.

Correspondence.

To the Editor of THE BUILDER.

THE HEATING AND VENTILATION OF THE HOUSES OF PARLIAMENT.

SIR,—Your correspondents appear to be drifting into unknown depths. This is not the time nor the place to enter into an apparently endless theoretical discussion on elementary facts, embracing the displacement, compression, &c., of air, in connexion with the complicated and special subject of ventilation, and, in closing this correspondence, so far as I am concerned, I will deal more with historical facts than elementary ones, and with the results obtained in the hard school of practical experience.

Ventilation is a science—quite distinct from that of architecture—and it really requires almost the close study of a life-time to master properly all its intricacies. It is unreasonable, therefore, to expect architects to be experts in heating and ventilation; and my lengthened experience in different parts of the world goes to show that the better class of architects never profess to have any special knowledge in this direction, but that they generally—as one of your correspondents states—"work with specialists in perfecting any system which both are agreed will secure the desired results."

In answer to the specific questions referred to by the same correspondent, I would again refer him to my report, wherein he will find a full and detailed reply to his queries.

I have made no new proposal "to carry out a scheme of ventilation based on a dual system of propulsion and extraction" for the Houses of Parliament, as has so erroneously been asserted. I have in my report fully explained the present system in use, have pointed out what I consider are the defects, and have suggested and recommended some simple but effective remedies, all of which I have most distinctly pointed out can be carried out if necessary by the mechanical staff employed at the Houses of Parliament, under the supervision of the Resident Engineer.

This trouble of inefficient ventilation in large legislative buildings—notwithstanding the enormous amount of fresh air that can be passed through them sometimes "without ventilating them"—as the eminent Glasgow architect (from whom I quoted in my last letter) so pithily put it, is not at all confined to the Houses of Parliament in this country. Some time ago I also had the privilege of carefully examining the heating and ventilating arrangements of the United States Capitol in Washington, where, though about double the amount of ventilation per head is given, both in the Senate Chamber and in the House of Representatives, to that allowed in the House of Commons in winter, the same evil, in the destruction of the atmosphere by warming it over a too highly-heated medium like steam-heat, appears to be experienced.

Considerable interest in America has consequently been taken in the report on the heating and ventilation of our Houses of Parliament, in which I have endeavoured to point out the true remedy, and I have just had the pleasure of mailing copies of the report—by special request—to the architect and superintendent of the Capitol, and to the chief engineers, respectively, of the Senate House and of the House of Representatives in Washington.

For many years the heating and ventilating installation at the Capitol in Washington was the greatest and most perfect example of "propulsion pure and simple" in the whole world. Two large fans, one of them 14 ft. and the other 12 ft. in diameter, one fan for each House, were (and are still) used for forcing in air under pressure on the Plenum system. After years of experience, however, it was found absolutely necessary to adopt Extraction as well, in order to ensure the certainty of the vitiated air being got rid of under all states of the atmosphere. Consequently, some years ago, two additional fans, each 6 ft. in diameter, were erected in the basement, and so arranged that the vitiated air was extracted from the ceiling of each House. This combination of Plenum with Extraction is still in use, and gives general satisfaction, so far as the ventilation alone is concerned. During winter, however, the evil results experienced in the Houses of Parliament on this side, by the overheating of the air by steam-heat, already referred to, still appear to exist at the Capitol in Washington.

The London Law Courts were, I presume, the greatest example in this country of "propulsion pure and simple" in ventilation, and there, again, we find, from the evidence of the Surveyor to Her Majesty's Office of Works, given in the 1891 report of the Select Committee of the House of Commons on Ventilation, that, before long, Extraction had to be resorted to, in combination with the Plenum system, in order to make the ventilation anything like tolerable and bearable. Mr. Taylor, the surveyor in question, stated, "We had to put the fans out of use until we created a much greater heat in the roof itself. The roofs were not warmed at all, as Mr. Street left them; they were almost open to the outer air, and in winter were absolutely cold. I had to carry a large system of steam-pipes round the whole of the roof, and to

create a current through the ceiling, and then increase the power of the pulls at the outlet."

As regards the National Liberal Club, I may remind your other and later correspondent that the ventilation planned on the pure and simple Plenum system, and carried out regardless of cost about seven years ago, turned out such a failure that the Committee on my suggestion about two years ago requested the successors in business of the firm who planned and carried out the work to report as to how matters could be improved.

The report of that firm was undoubtedly a modified condemnation of the system, and the remedies referred to by your correspondent and proposed by that firm were mainly to subdivide the heating pipes, &c., into sections, to improve the extraction, and to heat certain of the larger rooms, &c., by direct radiation from steam-radiators placed in the rooms, &c.

How your correspondent can, in the circumstances, quote the unfortunate example of the National Liberal Club, in support of the Plenum system of ventilation is beyond my comprehension.

As regards the same correspondent's assertion, that heating by hot water instead of steam "would certainly be a step in the wrong direction," I will only say that, according to this statement, my own practical experience of thirty years must have completely misled me, and our cousins on the other side of the Atlantic must also be stepping backward very rapidly "in the wrong direction."

If ever any mechanical arrangement was developed into almost a science during the last fifty years in the United States and Canada, it has been that of low-pressure steam-heating. Well, during the last ten years, and more particularly during the past five or six years, steam-heating in America has almost entirely given way to hot-water-heating, on the grounds, principally, of health, economy in the working, and easier regulation. To-day I have the best authority for knowing and stating that the ratio of the two systems being erected by steam-fitters and hot-water engineers throughout the whole of northern America is something like 90 per cent. for hot water, and only about 10 per cent. for steam-heating appliances.

Considering that the House of Lords is admittedly so much better ventilated by extraction alone than the House of Commons is by propulsion and partial extraction, and that the air passing into the House of Lords is if anything fresher, this air being also cleansed and warmed or cooled and given the necessary humidity, &c., and handled as desired, without any fan propulsion, by "extraction pure and simple," I think it may be taken for granted that extraction, rightly applied, is infinitely better all round than propulsion, though the two systems can, no doubt, be sometimes most usefully and efficiently combined.

Returning, again, to your architect correspondent, I cannot conceive how any one possessing the most elementary knowledge of ventilation could pen the following sentence, which appears in your correspondent's first letter:—

"And to provide outlets, therefrom, in such positions and so conceived that the air may, after being vitiated, quickly pass away without being obstructed or accelerated by movement of the outer atmosphere or any other influence." The supposition conveyed in the latter part of this paragraph, that air inside a building, under certain, or even any, outside atmospheric conditions, can "quickly pass away" without "being accelerated" by any influence whatever, is, to my mind, an absurdity. In conclusion, I can only repeat that so long as architects hold such views, so long will our public buildings stand every chance of being examples of inefficient and defective ventilation.

JAMES KEITH, Assoc. M. Inst. C. E.

SIR,—I feel sure that Mr. Keith cannot have a personal knowledge of the arrangements for the heating and ventilating of the National Liberal Club, otherwise he would not in fairness have expressed his opinion in such forcible terms as to condemn the system applied at the above club. I must call his attention to the fact that the apparatus was completed in the year 1887, and left to the satisfaction of those concerned. Unhappily, the care of the arrangements was placed in the hands of those who, unfortunately, did not give it the attention that was necessary for the working of such a system, and in consequence dissatisfaction and complaints ensued. Alterations have been made from time to time since the apparatus was erected, and one in particular, viz., the applying of forced draught to the boilers, which destroyed the smoke shaft passing through the ventilating shaft.

I think it is only justice to the late W. W. Phipson, engineer, the contractor for the above, who during his lifetime executed the heating and ventilating of a number of our public buildings and other works for many of our leading architects, that this explanation should be given.

C. H.

WROUGHT-IRON GATES, CARSHALTON PARK.

SIR,—Many of your readers will know the splendid wrought-iron gates which stand on the eastern side of Carshalton Park, guarding a drive and entrance ong since disused. It is only a few weeks ago that their almost total destruction was brought to my notice while walking from Wallington to Sutton. It seems that during last winter one of the large trees forming the avenue was blown down, and its giant branches have crashed right through the centre of the gates. The cresting is lying in fragments on the grass; the left-hand gate is ruined, and the other has suffered hardly less severely; the whole appearance is now quite tragic to anyone who values these examples of English art.

Only last June, when accompanying Mr. J. Starkie Gardner on an expedition to see the famous lock of Beddington (which we duly found in its place of honour at the end of the hall), I took the photograph of these gates, which I enclose. Owing to the strong western sun, the view had to be taken from one side, and I fear it is quite unsuitable for reproduction as an illustration of the gates, but it is probably the latest record of their original condition. You will remember that they are the centre of a long composition, ending with carved and moulded stone piers, supporting statues of Diana and Actæon.

I also enclose views, taken on the same occasion, of the gates at Carshalton House (where the crest has since disappeared) and Beddington Hall (showing the initials of one of the Carews), which are evidence of how much interesting ironwork there is in this neighbourhood.

R. LANGTON COLE.

SEWER AND DRAIN VENTILATION.

SIR,—I have myself, with friends, put to the practical test the working of this so-called system of ventilation in large districts under all conditions, and where the work has been performed by men who, judging by the way the work is done, require no lessons from Mr. Buchan, and with the result to justify entirely the assertions Mr. West has made.—

J. C. KENWOOD.

*** One system may have been a failure under some conditions, but it does not follow that the other one is right. We agree with Mr. Buchan, at all events, in the general opinion that "to use the soil-pipes of our houses to ventilate our sewers is a dangerous plan."—ED.

THE ARCHITECTURAL ROOM AT THE ROYAL ACADEMY.

SIR,—My statement may well be looked upon with suspicion by the architectural world, but I can assure you I counted between forty and fifty people in the Architectural Room of the Academy at one time (inclusive of those sitting down) on Saturday last.

Things are looking up.

A.R.I.B.A.

The Student's Column.

THE STRUCTURE AND PHYSICAL PROPERTIES OF BUILDING STONES.—XXII.

12. THE YORKSHIRE DISTRICT.

A LARGE part of north-east Yorkshire is occupied by oolitic rocks, which yield a number of building stones, not much known outside the area. The superabundance of Carboniferous sandstones in the county has, apart from other reasons, rendered the trade in oolitic limestones comparatively unimportant. We are not personally acquainted with the district, but the particulars which follow are derived from official sources, principally from the recently-published memoir of the Geological Survey by Mr. Fox Strangways.

The building stones of north-east Yorkshire are obtained from the following geological horizons:—

1. The Upper Calcareous Grit.
2. The Upper Limestone.
3. The Middle Calcareous Grit.
4. The Passage Beds.
5. The Lower Calcareous Grit.
6. The Kellaways Rock.
7. The Upper Estuarine series (Moor Grit).
8. The Middle Estuarine series.
9. The Millepore Bed and Cave Oolite.
10. The Lower Estuarine series.

The first horizon yields a stone known locally as North Grimston cement stone in the neighbourhood of Langton, Birdsall, and North Grimston. It breaks into short flaggy pieces, and has occasionally been used in the construction of farm buildings.

The Upper Limestone division yields probably the best stone for interior and ornamental purposes in the district. It is quarried principally at Hiidenley, where the material is extremely fine-grained, and somewhat resembles indurated chalk. Its structure is remarkable, showing a considerable amount of chalcedonic silica, not only interspersed amongst the particles of the stone, but as silicified fossil shells. The latter, especially a small species of *Ostrea*, is thus converted into such a hard substance that the masons' chisels suffer in consequence, whilst the homogeneity of the stone as a whole is interfered with. Nevertheless, average chemical analyses indicate that it contains about 95 per cent. of carbonate of lime. It is of a whitish cream colour, and the section in the quarry gives about 15 ft. of workable stone in thin beds, the thickest bed being about 22 in. The material has been employed, amongst other places, in the Chapel at Castle Howard and for interior work in Kirkham Abbey. The fine state of preservation of the mouldings in these ruins, which have been exposed to the weather for many centuries, testifies to its durability as a building stone.

The Middle Calcareous Grit yields massive beds of freestone at the western end of the vale of Pickering, on either side of the river Rye above Helmsley. It has been quarried at several places in Thornton Dale, where the oolitic beds used for building are up to 18 in. in thickness, but the same quarries yield calcareous sandstones as much as 5 ft. on the bed. In structure, the limestone beds (which are really the top of the Lower Limestone division) may be described as impure and slightly oolitic, whilst some are very shelly. The best-known quarries in the Middle Calcareous Grit horizon, however, are those at Pickering, where the following beds belonging to this series are seen just below the Castle, according to Mr. Fox Strangways:—

Section in Pickering Quarries, East side.

	Ft.	In.
Solid beds of limestone	5	6
Rubbly oolite, with coarse pisolitic bed	4	0
Thick irregular bed of limestone	2	6
Oolite with irregular blue-centred limestone	4	0
Thin limestone bed	0	6
Smooth limestone	1	0
Impure limestone	5	4
Soft yellow freestones with calcareous bands	11	0

The beds are stated to be so variable, both in structure and thickness, that the above only furnishes a general idea. They really consist, says Mr. Fox Strangways, of an irregular series of sandstones and calcareous beds, in which the sandstones largely predominate, especially towards the lower part; in the upper part several calcareous bands or irregular lenticular masses set in. Examples of Pickering stone may be seen, not only in the town, but in the large mansion at Duncombe Park, and the college at Ampleforth.

There is no lack of quarries in the 4th division—the Passage Beds—especially in the northern part of the Tabular Hills between Hackness (near Scarborough) and Kirk Dale, but they are for the most part shallow, and yield nothing but second-rate material, used in the construction of inferior buildings and for field-walls. The rock is known in the vicinity of Hackness as "Wall-stone." In structure, it is coarse and rubbly, generally splitting into large slabs.

The Lower Calcareous Grit, according to the Geological Survey Memoir before alluded to, is employed as a building stone along the whole range of its outcrop, from the coast at Scarborough to the Hambleton Hills, and throughout a great part of the Howardian Hills. It is said, however, to be too soft, as a rule, to be of much value, and is inferior to many of the other beds found in the district. The more noted quarries, as producing the best stone, occur along the southern outcrop of the formation along the Howardian Hills. Foremost amongst these is the famous Park Quarry, near New Malton, the microstructure of which indicates that it is a sandstone composed of minute quartz grains, with an argillo-siliceous cement, and is of whitish brown tint. The workable stone is 10 ft. in thickness, the beds being from 16 to 20 in. in depth. It has been used, amongst other buildings, in the construction of Castle Howard. At Appleton-le-Street are several quarries from which came the pilasters of the south front, and the stone used in the stabling of that castle. Brows Quarry, at Malton, is also well known, and yields the following section:—

Section at Brows Quarry, Malton.

	ft.	in.
Buff-coloured, gritty, sub-oolitic limestones and brash	6	0
Bed occasionally containing much fine-grained calcareous grit	2	0
Buff-coloured gritty limestones, with a very few straw-coloured granules, in thick beds, with thin brashy partings	12	0
Calcareous gritty freestones, alternating with blue stone	27	0

The large quarry at Birdsall has been worked for many years, and has provided material for many important buildings in the vicinity. The general composition of the Lower Calcareous Grit is a yellow calcareous sandstone with cherty bands, &c., passing down into softer sandstones, which become shaly towards the base. Mr. Fox Strangways remarks that although the term "grit" is applied to this rock, there is very little of it that would be called a grit amongst older formations; in fact, many of the sandstones, even of the Lower Oolite, are harder and firmer and far more gritty than this bed.

The quarries in the Kellaways Rock are not so actively exploited as they were a few years ago, although yielding excellent freestone at Hackness and Levisham. The formation may be described as a soft, thick-bedded sandstone of a brownish-yellow colour; in certain localities it is very ferruginous, when it assumes a deep red colour, and is hard and compact. In the centre of the district it is usually a porous, friable sandstone. Like many other freestones, it is easily worked when first quarried, but hardens on exposure, when it forms a durable building stone, as witness the church and hall at Hackness, the museums of Scarborough, York, &c.

The sandstones of the Lower Oolite division are largely employed as building materials in the district. They are, as a rule, coarse in texture, massive, and suitable for structures where strength is required, and for general ashlar. Commencing with the Upper Estuarine series, we find an important bed of sandstone—the Moor Grit—at its base. This is said to form an excellent building stone, and is quarried at numerous places—notably at Cloughton, Harwood-Dale Moor, Sneaton, Grinkle-lane, Wygrave, and Tidkinhow. Between Danby station and Easington a sample of the stone, derived from a large opening, was described by Mr. J. A. Phillips.* Under the microscope this rock is seen to be almost entirely composed of quartz grains, more or less sub-angular, between which a deposit of transparent crystalline quartz acts as a cement. It is white and fine-grained, being often so compact as to be entitled a quartzite rather than a grit. In some places, we may remark, the Moor Grit splits into slabs of great size, and furnishes a good flagstone.

The Grey Limestone horizon produces no building stones of any importance in the district, though it has received the appellation of "pier stone," from the circumstance that it was used in the construction of the harbour pier at Scarborough.

At Hayburn Wyke and some other places the sandstones of the Middle Estuarine series have been quarried for years, and the material has a good reputation, being employed at Scarborough and elsewhere.

The Millepore Bed is a very hard siliceous rock, breaking up into rough irregular blocks, and has been used for marine works in the district. It is especially suitable for the formation of breakwaters and sea-walls.

The Cave Oolite, on the other hand, is a soft, sandy oolitic limestone, sometimes called "Cave marble," though how a soft stone of this description could be polished into a marble we know not. In the neighbourhood of Brough and near Cave are several quarries; material from the former was used in the construction of the docks at Hull.

The Lower Estuarine series produces the most celebrated building sandstones in the district, particularly at Aislaby, from which place Whitby Abbey and many London buildings have been supplied. In structure it is a light brown sandstone having quartzose grains of moderate size, with an argillo-siliceous cement; small pieces of mica and some carbonaceous matter are present. The workable stone is about 80 ft. in depth, 30 ft. of which is a very fine grit, one half being white and the remainder a cream tint; the other 50 ft. is a strong coarse grit. The thickest beds obtainable are from 12 to 15 ft. Lower Estuarine sandstones have also been quarried at Shaw End, near Leatholm Bridge; whilst the flagstones from Rosedale are of exceptional quality.

* "Quart. Jour. Geological Society," vol. xxxvii., p. 16.

GENERAL BUILDING NEWS.

PUBLIC BATHS, SHREWSBURY. — New public baths, which have been erected in the Quarry at a cost of over 7,000*l.*, have just been opened at Shrewsbury. The baths have been built by Mr. H. Farmer, of Shrewsbury, from plans prepared by the Borough Surveyor (Mr. W. C. Eddowes). The baths comprise a central dome and two wings, and include a house for the superintendent. They are built of red pressed bricks, with copings and string-courses of Ruabon bricks and stone facings. Inside, to the right of the ticket-office, are the first-class plunge (or swimming) bath and private slipper-baths. The plunge-bath is 60 ft. long by 30 ft. wide, has an estimated capacity of about 53,000 gallons, and slopes from a depth of 3 ft. 3 in. at one end to 6 ft. 6 in. at the other. There are 31 dressing-boxes to the bath. The second-class plunge-bath forms the wing to the left of the main entrance, and is 82 ft. 6 in. by 32 ft. 6 in. It has a similar depth of slope and an estimated capacity of 82,000 gallons. In this bath there are no dressing-boxes, but there are spaces the length of each side of the bath partitioned off for dressing purposes. There is also a shower-bath and a soap-bath, and an attendant's office is attached to each bath. In addition to the above there have been provided a number of private slipper-baths, and these are placed beneath the dome in the central portion of the building and midway between the large baths. Of the first-class slipper-baths, two each are provided for ladies and gentlemen, these being supplied with dressing and waiting rooms and other necessaries. A steam-laundry is situated at one end of the buildings. The swimming-baths are lined with white glazed bricks, and are lighted from the roof. Special exits are provided in case of fire, and if deemed necessary hereafter a gallery can be erected over the dressing-boxes in both swimming-baths. Additional slipper and Turkish baths can also be provided if required. During the day the baths will be lighted from the lantern-lights in the roof, and at night by gas. The glazing, painting, and other decorative work has been carried out by Mr. R. France, while Messrs. Scull did the plumbing work. The engineering work was carried out by Messrs. Thomas Bradford & Co., of Manchester and Liverpool, under the superintendence of Mr. Eddowes and Messrs. Bradford's engineer. This firm also fitted up the steam-laundry.

NEW SCHOOLS, TOTTENHAM.—The Tottenham School Board have commenced another large school near the Alexandra Palace, in the Bounds Green-road. The contract has been let to Mr. Charles Wall, of Chelsea, at 14,800*l.*, and the plans have been prepared by Mr. E. H. Lingen-Barker, architect, of London.

BOARD SCHOOLS, BROCKLEY. — New Board Schools were opened at Brockley on the 23rd ult. by Mr. J. R. Diggle, the Chairman of the London School Board. The school buildings occupy about an acre and a half of ground, and have been built at a total cost of 15,790*l.* The schools consist of two large one-storied buildings: the larger for boys and girls, the smaller for infants, with open playgrounds. Passing through the portals of the girls' entrance and approaching the main building, the corridor is passed, with a girls' cloak-room to the right, and two large class-rooms on the left. The central hall is 87 ft. by 36 ft. The roof is of glass; and screens, drawn underneath the dome portion of the roof, temper the sun's rays when necessary. On the left there is another class-room, flanked by a boys' cloak room; and again succeeded by other two rooms; the same as obtain on the adjacent side of the hall; at the top of which is an erected platform. Two flights of stairs to right and left lead to the teachers' rooms, under which are other boys' and girls' cloak-rooms for the different standards. Adjoining the mixed school is the boys' playground. Each of the class-rooms in the main building is 25 ft. by 26 ft., and 15 ft. high. The infants' school has a hall 57 ft. by 32 ft. with class-rooms on the sides, lavatories, and cloak-rooms. It has red brick dressings, blue brick plinth, and low slated roofs. The inside has a brown glaze dado 4 ft. high, and is finished above with Medway gauls, bricks being afterwards distempered. The floors are laid with pitch pine wood blocks, the class-rooms having stepped platforms for the desks. The wood-work, generally, is stained and varnished. Lavatories are provided for each department. The heating is carried out on the one pipe low-pressure system with radiators in each room. Covered-in playgrounds are provided, in case of wet weather, for each department. The accommodation is for 800 children at present, with a provision for an enlargement of six class-rooms, which will bring the accommodation up to 1,200. The playgrounds are tar-paved; and the drainage, carried for three-quarters of a mile, is laid with best London pipes, joined with cement, and laid to stand the water test for twenty-four hours before being filled. The design of the buildings is by the Board's Architect, Mr. Bailey, the contractors being Messrs. Kirk & Randall, of Woolwich (the cost of the erection of the buildings being 13,400*l.*). The heating has been carried out under the Board's Engineer, Mr. Millington, by Messrs. J. C. & J. L. Ellis, of London. The whole work of the erection of the schools has been under the superintendence of Mr. G. Wilson, the Board's clerk of works.

CATHOLIC CHURCH, DORKING.—The foundation stone of the new Roman Catholic Church about to be erected in Falkland-grove, Dorking, was laid on the 17th ult. The character of the new church will be Early Gothic, and the building will provide accommodation for about 400 worshippers. For the present it will remain in an incomplete state until the necessary funds are forthcoming. The present plans show the nave, one aisle and sanctuary; the tower and second aisle will be added at some future period. Messrs. Longley, of Crawley have contracted to erect the building as at present designed for a sum of 5,700*l.* Mr. F. A. Walters, F.S.A., of Croydon and London, is the architect.

SHERIFF COURT HOUSE, KIRKCALDY.—On the 21st ult. the building which has been erected for the new Sheriff Court-House, Kirkcaldy, and which stands at the north-east corner of Whytehouse Grounds, was opened. The designing of the building was entrusted to Mr. Gillespie, architect, St. Andrews. The architecture is chiefly of the Scottish Baronial type. The elevation towards Wemyssfield shows the entrance doorway in a massive central block, which in the third story terminates in a balcony with balustrade. At the angle of this block is a tower, circular below, and of octagon shape in the upper stages, reaching about 70 ft. in height to the apex of a conical top, and ornamented with bands, mouldings, shields, &c. Next to the tower the most conspicuous feature are three windows, with double transoms, lighting the hall or court-room, an apartment about 40 ft. long by 20 ft. in width, with a high-pitched roof. The Sheriff's private room, jury-room, and witnesses'-room are connected with the court-room, and contain all the modern conveniences, and the keeper's house is situated at the rear of the building. The contractors were:—Messrs. George Smith & Sons, Kirkcaldy, builders; Mr. Thomas Harris, St. Andrews, joiner; Mr. Alex. Ferguson, Kirkcaldy, slater; Mr. Robert M'Gregor, Dunfermline, plasterer; Messrs. Robert Frew & Sons, Perth and Kirkcaldy, plumbers; Mr. Frank Ritchie, Kirkcaldy, smith; Messrs. W. Bryden & Sons, Edinburgh, bellhangers; Mr. Hay, Newburgh, painter.

RESTORATION OF CHURCH, LINTHWAITE, YORKSHIRE.—On the 26th ult. the corner-stone of a new chancel for Christ Church, Linthwaite, was laid by Mrs. William Brooke, of Northgate Mount, Honley. The church was built in 1826, and was opened in 1828. It has remained up to the present time without a chancel. The one now to be added will, measured from the inside, be 25 ft. long, 18 ft. wide, and 22 ft. high, and will be built in conformity with the present structure, of ashlar-stone from the local quarries on Crosland Hill. The window at present at the east end of the church will be reduced in size and utilised for the chancel window, but the painted glass will be replaced by cathedral-tinted glass. In addition to the erection of the chancel, various improvements will be effected in the church. The gallery will be reduced in size, and the body of the church will be re-seated with open seats of red deal. A new floor of concreted wooden blocks will be put down, and there will be new choir stalls and pulpit of oak. The present porch on the south side will be made into a baptistry, and the entrance in future be by the west tower. A new organ will also be provided. Mr. C. Hodgson Fowler, of Durham, is the architect, and the following are the contractors:—Mr. John Walker, Linthwaite, mason; Messrs. Wood Bros., Huddersfield, joiners; Messrs. W. & P. Holroyd, Huddersfield, painters; Mr. E. Sykes, Milnsbridge, plumber; and Messrs. Johnson & Sons, Mirfield, plasterers and slaters. It is estimated that the total cost will be about 2,500*l.*

VOLUNTEER DRILL HALL AT HARROGATE.—The memorial stone was recently laid of a drill-hall which is being erected in Franklin-road, Harrogate. The length of the drill-hall proper, irrespective of the entrance, is 91 ft. long by 43 ft. wide. The building includes armoury, retiring-rooms, and lavatories on the ground-floor, whilst on the second story are three rooms available for officers, sergeants, and men. The structure is fronted by an ornamental tower, which is large enough for the accommodation of the sergeant-instructor and his family, who will reside on the premises. The drill-hall is estimated to cost 2,200*l.* The building is being erected to designs and plans prepared by Messrs. H. E. and A. Brown, architects, Harrogate, whilst the contractors are as follows:—Masons' work, Mr. Anthony Brown; plumbers' work, Mr. W. Bellerby; joiners' work, Messrs. Michell & Carrick; slater, Mr. W. Baynes; plasterer, Mr. C. Fortune; painter, Mr. J. R. Petty.

NEW BOARD SCHOOLS IN PLYMOUTH AND DEVONPORT.—The North-road School, a tender for which has just been accepted by the Plymouth School Board, will be erected at the western end of Boon's-place, and will have a frontage in North-road, 105 ft. in length. It will accommodate 780 children, and will have, in addition, two central halls. The building externally will, on all sides, be of Plymouth limestone, with Portland stone and Ham-hill stone dressings, and will be in the Elizabethan style treated simply, but with some regard to the prominence of the site. The Ford School, to be built by Messrs. A. R. Lethbridge & Son, on a site secured by the Devonport School Board, is for 540 girls and infants, and will also contain two large central halls which, with the class-rooms on each side of the hall on both floors, will be heated by hot water. The walls will be of brick on limestone plinths. There will be covered as well as open playgrounds. Both of these schools will be built from the designs, and under the direction of, Messrs. Hine & Odgers, architects.

ELECTRIC SUPPLY STATION, HAMPSTEAD.—The ceremony of fixing the foundation or commemorative stone of the new Central Electric Supply Station for the Vestry of St. John, Hampstead, has just been performed by Mr. James Thwaites, Chairman of the Electric Lighting Committee. A silver trowel was presented to the Chairman by Messrs. Yerbury & Sons, the builders, and a mallet to the architect. The buildings, which are nearly complete, have been built in stock bricks and red brick facings, &c. The chimney-shaft, 140 ft. high, is 16 ft. square at the base and 12 ft. square at the springing of cap; it is faced with picked stocks and red brick pilasters and dressings, relieved with plain bands of grey Luton bricks. The stone for cornice and cap was supplied by the Bow-stone Company, of Maidstone. The shaft is built of sufficient size to meet the requirements of the complete station, only one-half of which has for the present been erected. Mr. Arthur Ardron is the architect.

CAKE FACTORY, CARDIFF.—This building, which has just been completed for the Dulcia Cake Company, is situated in the Penarth-road. The softness of the site, which backs on to the Taff River, necessitated deep holes being dug all over it, and these were filled with concrete. The main building is 75 ft. by 40 ft. and contains three floors, the mixing-room, bakehouse, and chief office being on the ground-floor. The second floor is used as a packing room and has lavatories and water-closets, and another office, while a general store-room occupies the second floor. One of Messrs. T. Thomas & Sons' (of Cardiff) patent "Acme" hoists connects all the floors. The mixing machinery, which is driven by means of shafting connected with a Tangyes' gas-engine, was supplied and fixed by Messrs. J. Baker & Sons, of London; the cake-ovens were built by Messrs. A. Hunt, of Leicester, and George Davies, of Abergavenny; and the ironwork for the floors was supplied by Mr. A. D. Dawnay, of London and Cardiff. The building, of which Messrs. Veall & Sant, of Cardiff, were the architects, is entirely erected of brickwork, with Forest Dean stone sills and keystones, and the carving was carried out by Mr. W. H. Wormleighton, of Cardiff. The contract has been executed by Messrs. Knox & Wells, of Cardiff.

CLOCK TOWER, COURT HOUSE, SHILLELAGH.—Earl Fitzwilliam is about to add a clock tower to the Court House at Shillelagh, from designs by Mr. G. Hamilton Gordon, of London. The clock has been presented to him by his Irish tenants, in commemoration of the coming of age of his grandson and heir, Viscount Milton.

SANITARY AND ENGINEERING NEWS.

AN ESTATE WATER SUPPLY.—There has just been completed a scheme for the supply of water to the mansion-houses of Halleaths and Broadholm, Lochmaben, and Dryfeholm, Lockerbie, besides the various farmhouses and cottages on the estates. Hitherto the only supply available has been from wells and springs, the quality of the water from which could not always be reliable. A burn running through the farm of Thorniethwaite was fixed upon, and on being gauged was found to meet all the requirements. A reservoir was built about 500 ft. above sea-level, and capable of holding 200,000 gals. From this the water passes through a filter bed into a clear-water tank with a capacity of 38,000 gals., and is then distributed through nearly eight miles of piping. The whole scheme, which will cost over 2,000*l.*, has been carried through at the instance of Sir Robert Jardine, Bart., of Castlemilk, and Mr. A. J. S. Johnstone, of Halleaths. Mr. A. Chapman, surveyor on Castlemilk estate, was the engineer of the scheme.

NEW RAILWAY TO HARROW-ON-THE-HILL.—The Unopposed Bill Committee of the House of Commons passed, on Tuesday, a Bill authorising the incorporation of the company for the purpose of constructing a railway commencing by a junction with the Metropolitan District Railway at Ealing and terminating at Harrow-on-Hill. The share and loan capital authorised by the Bill is 160,000*l.*

WATERWORKS, BALLYCASTLE, NEAR BELFAST.—On the 21st ult. the new waterworks which have been constructed at Ballycastle were opened by Miss M'Gildowney. The supply of water to Ballycastle is obtained from two springs situated on the western slope of Knocklayde. The elevation is about 770 ft. above sea level, and about two miles distant from Ballycastle. The water is intercepted by means of two collecting tanks, built of concrete and provided with overflows. The water is then conducted by means of a line of 3-in. cast-iron pipes, for about one mile, into a pressure tank, which is also built of concrete, and provided with an overflow and a valve for regulating the supply to Ballycastle. This tank is about 450 ft. over sea level, and is at a sufficient height to deliver water at a high pressure to the most elevated parts of the town. A line of 4-in. pipes is laid from the pressure tank down the mountain slope, across the railway, and into Ballycastle for town supply. The water is then distributed along the different streets and down to the quay. These pipe-lines are supplied with the necessary valves, fire hydrants, and fountains. There are about 2,750 yards of 4-in. pipes, and about 3,220 yards of 3-in. pipes. The total cost of the works is 1,028*l.* The engineer for the scheme was Mr. L. L. Macassey, of Belfast, the works being carried out by Messrs. Boyle & Clyde, contractors, Ballymena and Ballycastle. The valves, fire hydrants, and fountains were supplied by the Glenfield Company, Limited, Kilmarnock, and the pipes were furnished by Messrs. D. & G. Stewart & Co., Glasgow.

STAINED GLASS AND DECORATION.

WINDOW, MARY TAVY CHURCH, DEVON.—Stained glass has been inserted in the east window of this church. The window is a three-light Perpendicular one, the stonework of which has been restored by Mr. Edmund Sedding. The subject illustrated runs through all the lights, and is under canopies of the period. It depicts a vision of Our Lord in Glory, surrounded by kings, bishops, men and women, indicating all states of the Church triumphant. Above the head of Our Lord is held a crown, supported by two flying angels. The donor is the Rev. J. K. Anderson, Vicar of the church. The window was executed by Messrs. Percy Bacon & Brothers, of London, under the direction of the architect.

FOREIGN AND COLONIAL.

FRANCE.—The jury of the competition for the construction of a group of schools at Montrouge have selected the design of MM. Dupont and Albert Guibert for execution, and given a first premium to M. Courtois-Suffit and a second to M. Trinquesse.——On Sunday last the new bridge over the Marne at Bonneuil was officially opened.——At Paris, in the XIIIth Arrondissement, the foundation has just been laid for a new church, that of "Sainte-Anne de la Maison Blanche."—— The railway company "de l'Ouest" is about to erect a new and important terminal station at St. Cloud, to be reached by a large bridge over the low-level streets. A large granite staircase will also lead up to it from the Place de l'Hospice, at the entry of the Parc de Montretout, and will also serve to connect the upper and lower town. —A line from Trilport to Ferte Milon is to be opened on July 1.——The municipality of Marseilles has opened a competition for the construction of a building for the Faculté des Sciences.——The museum at Bernay (Eure) has just received, as an addition to its treasures, a fine portrait attributed to Alonzo Cano.——At Lyons there has been inaugurated a marble statue, the work of M. Aubert, to the memory of Bernard de Jussieu.——The great octagon flèche of stone, 60 mètres high, which crowns the church of Notre Dame de Bon Secours at Guingamp, is about to be repaired and restored. The church is a curious monument of twelfth-century architecture, It is also proposed to rebuild the hexagonal tower of Romanesque date adjoining the cathedral-church of St. André at Gap.——New barracks are in course of erection at Brest, on the site of the old fort "des Fédérés."——The Ministry of War has definitely approved of the demolition of the fortifications of Vitry.——A large project is under discussion for diverting all the water of the Durance river below St. Martin de Gueyrières, by means of an immense "barrage," and leading it in a tunnel to a point above the village of Bessée in order to create a fall more than 80 mètres in height, which will serve as a motive power for electricity.—— M. Nonjean, an artist who had made a speciality of of little landscapes in terra-cotta, finished with great minuteness, has died at Arras.——Last Saturday, at the Champs Élysées Salon, the vote was given for the "médailles d'honneur," which in architecture was awarded to M. Georges Chédanne for his study of the Pantheon at Rome. Of the other architects "in the running," M. Hannotin had seven votes' M. Coquart two, and MM. Doumic and Parent one each. M. Chédanne was born at Maromme in 1860, and obtained the Prix de Rome in 1887.—— The façade of the Pantheon at Paris has for some days disappeared behind scaffolding, which has been raised for the repair and restoration where necessary of the pediment sculpture by David d'Angers. No repair has been made since 1844 to the exterior of the building, which bears traces of the civil wars and of the bombardments of 1871.

PUBLIC WORKS IN THE CANARY ISLANDS.—According to a recent report of the British Consul at Teneriffe upon the trade and sanitary condition of the Canary Islands, both in Grand Canary and Teneriffe progress in road-making continues. An improvement in the water supply of houses and buildings is to be made by substituting iron for stone pipes. The latter, in the upper part of the town, are frequently broken, and sewage gets into them, contaminating the water—of excellent quality —from springs in the mountains. Lighting the town of Santa Cruz, in the Island of Palma, by electricity, has proved a very successful undertaking, and it will probably be adopted at once at Orotava in Teneriffe. The Taoro Grand Hotel has been fitted with the necessary wires, lamps, &c.

MISCELLANEOUS.

THE SURVEYORS' INSTITUTION.—The annual general meeting of the Surveyors' Institution was held on the 28th ult. at the Rooms, 12, Great George-street, Mr. C. J. Shoppee, President, occupying the chair,—The report, read by the secretary, Mr. Julian C. Rogers, stated that the past year had been almost exclusively devoted to the work of consolidation. The Institution continued to prosper in every respect, and there had been no slackening in the efforts of the Council to promote its usefulness. The statement of accounts showed that the finances were in a very flourishing condition, and the liabilities at the present time did not exceed 150*l.* The total investments, estimated at present prices, represented a sum of 27,358*l.*, which did not include their premises, furniture, and valuable library. The report and accounts were adopted, and at the conclusion of the formal business the President presented to the successful candidates the prizes won by them in connexion with the recent professional examinations. A vote of thanks was passed to Mr. Shoppee, the retiring President, and the proceedings shortly afterwards terminated. —Mr. T. Chatfeild Clarke, who during the afternoon was elected President, took the chair in the evening at the annual dinner of the Institution, held at the Holborn Restaurant. The usual loyal and patriotic toasts having been honoured, Mr. D. Watney proposed "The Houses of Lords and Commons," and the Duke of Devonshire replied for the House of Lords and Mr. Jesse Collings, M.P., replied for the House of Commons. Mr. E. P. Squarey proposed "The Surveyors' Institution," and the Chairman, in reply, congratulated the members on the progress the society had made. He urged them not to forget that the interests of the Institution were bound up with those of the surveyors throughout the country, and said the society had no object but that of raising the status of the profession. Other toasts followed, and, on behalf of the members, the Chairman presented the Secretary, Mr. J. C. Rogers, with a service of plate and a purse of 400 sovereigns in recognition of his long services.

TRAVELLING GREENHOUSES.—The "Horticultural Travelling Structures Co." send us a description and illustration of their system of glass houses or plant protectors constructed to run on rails, with heating apparatus to move with them if required. The inventors claim that this will enable a succession of forced crops to be produced, without the manual labour of shifting the plants or the soil. The labour of watering can often be saved by moving the structure off the crop during rainfall. The system seems worth attention, though of course the necessity for the laying down of rails must mean that the ground must be laid out and planned specially for its working.

DAMPIER'S INTERCEPTOR AND INSPECTION SHAFT.—This is an interceptor with a manhole or inspection shaft made in glazed stoneware in two, three, or more socketted lengths as required, so that the manhole becomes part of the whole structure, instead of being built separately in brickwork. There are some advantages in this, in regard to completeness of fitting and workmanship; and moreover, as the patentee (Mr. R. F. Dampier, Stoke, Devonport) observes, the stoneware will not get impregnated with sewer emanations as the brickwork does.

ANCIENT ALTAR SLAB, ABERGAVENNY.—During alterations at the premises known as the "Cow" (formerly an inn), at Abergavenny, where paper had been partially stripped from the chimney-breast, just over the fireplace, a large slab of stone was exposed to view. Near one of the corners of this slab was a small cross roughly cut into the stone. Mr. Gardner, an archæologist, examined the slab, and found that it measured 7 ft. 6 in. in length, 2 ft. 8 in. in width, and 5 in. in thickness. This, combined with the fact that at each corner of the slab and near the middle of it there were small crosses similar to that which had at first attracted his attention, convinced him that here he had one of the few ancient altar-stones whch had escaped destruction at the hand of Cromwell and his followers. The small crosses at the corners represent the nail wounds in the hands and feet of the crucified Saviour, and the cross near the middle the spear wound in the side. The dressing chiefly in view is of Norman workmanship, over a rougher dressing of an earlier date. Mr. Gardner presented the relic to the vicar of Holy Trinity and the churchwardens. It now stands on an oaken table with panelled front, surmounted by a re-table, affording a view of the marks on the furthermost side of the slab.—*Hereford Times.*

ROMAN REMAINS AT ROCHESTER.—Some archæological discoveries have recently been made at Rochester, which are held by antiquaries to throw a new light upon the history of the city and upon the plan of its ancient defences. The pick and spade investigations, carried out under the superintendence of Mr. George Payne, F.S.A., secretary of the Kent Archæological Society, have revealed the fact that the Romans walled in Rochester at the time the city formed one of their stations. The course of this wall, which reduced the city to smaller limits than has been disclosed by historical works on Rochester hitherto, has been traced underground from point to point. Beneath Dean Hole's lawn the masonry is 7 ft. thick

The front of the ancient Bishop's Palace was built upon the old Roman wall. Some of the public streets also pass over this wall, which altogether enclosed an area of 23½ acres. It is now established that Rochester has been walled in at three different periods, and remains of all three walls—Roman, Norman, and Henry III.—are in existence. On each occasion that new walls were built the boundaries of the city were apparently extended. An important feature in the discoveries just made is the fact that the old Roman wall recently found is in a direct line with the base of the Castle wall overlooking the river, which corroborates the theory that has been held for centuries by archæologists, that the Castle wall is built upon Roman foundations. Another point established is that the relics of ancient walls remaining above ground, and the date of which has been classed as "doubtful" hitherto, are in reality Roman, and correspond in every particular with the wall which has been proved to be beneath modern Rochester. These relics are described as some of "the finest bits of Roman wall to be found anywhere in England."—*Southport Visiter.*

ANCIENT CARVED OAK DOORS SOLD AS LUMBER.—A Stratford-on-Avon correspondent states that the inhabitants of that place are indignant at a matter that has just come to light. One of the churchwardens, new to his duties, has sold as old lumber the ancient carved oak and panelled doors of the north porch of the parish church celebrated as the burial-place of Shakspeare. The vicar and the other churchwarden knew nothing of the matter until the bargain was completed. The doors were put up a century before Shakspeare's time, and recently they were temporarily removed to disclose some old carving and a peculiar holy water stoup in the porch. The doors weigh half a ton, and are in perfect condition. It is stated that the purchaser meant to use them in the construction of a pig-sty; but during their removal inquiries were set on foot, and now the purchaser is being implored to restore the doors, but he is anxious to make a profit out of the transaction. It is contended that the doors form part of the church fabric, and were consecrated with the building, and that only after obtaining a faculty from the Bishop could they be disposed of.

SALE OF THE ALBERT PALACE.—Messrs. Horne, Son, & Eversfield sold, on the 29th ult., in lots, the Albert Palace and Connaught Hall, Battersea. The site of the Palace was not put up for auction, having already been sublet by the Office of Works for building of large tenements. The marble columns taken from Baron Grant's house in Kensington, and the stonework taken from the old Law Courts, besides the Picture Gallery and the Dining-room, were sold before the auction by private contract. Lot 1, composed of all the glazed roof, fetched 1*l.* 5*s.*, and prices ranged about the same average. Lot 14, the ironwork of the East Annexe, which comprised three cast-iron gutters, ten principals, and fifteen columns, fetched 38*l.* The bidding was confined to a comparatively small number of builders and dealers in this kind of material.

THE RICHMOND OLD DEER PARK.—A meeting was held on Tuesday at Richmond Theatre, with a view to considering a proposal that the Richmond Town Council should acquire the Old Deer Park from the Crown. The meeting was called by the mayor, Alderman Szlumper, on a requisition of burgesses. Councillor Thompson explained the details of the proposal, which included the devoting of seven acres to a free playground for school children of Richmond, seven acres to allotments, and the making of a footpath across from Richmond town to the new foot-bridge. Councillor Thompson said that he had the authority of a committee of local gentlemen to say that they would be willing to guarantee the town council against loss by paying them for the park, after the deduction of the footpath and the fourteen acres, as much as they paid for the whole. The following resolution was carried almost unanimously:—"That in view of the great importance of the Richmond Old Deer Park as an open space and public pleasure ground, this town's meeting of burgesses of Richmond respectfully urges the Chief Commissioner of Woods and Forests to facilitate in every possible manner the hiring of the park by the Corporation of Richmond on the most favourable terms, so as to enable the masses of the people of Richmond and London to derive the utmost possible advantage therefrom."

COMMISSION OF SEWERS.—On the 24th ult., a banquet was held at the Cannon-street Hotel, which was given by the Commission of Sewers to meet the Lord Mayor and Sheriffs, and to do honour to the late Chairman, Mr. H. H. Bridgman, F.R.I.B.A. The chair was taken by Alderman Bell, F.R.G.S., who was supported on his right by the Lord Mayor. Amongst other toasts proposed was "The Health of the Past Chairman," which was given by the chairman of the evening, who said that Mr. Bridgman had been a prominent member of the Corporation, and had taken a leading part in many important debates. It was usual for the colleagues of the chairman on his retirement to present him with some recognition of their appreciation of his year's work, and the honour of making the presentation to Mr. Bridgman that evening had been placed in his hands. A full-sized portrait in oils of Mr. Bridgman, painted by Mr. Manton, was then unveiled, and the chairman said that on behalf of his colleagues and himself he had very great pleasure in presenting it to Mr. Bridgman. Mr. Bridgman acknowledged the compliment that had been paid him.

ROMAN ROADS IN DUMFRIESSHIRE.—At the concluding meeting of the present session of the Society of Antiquaries, held in Edinburgh on the 21st ult., Dr. James Macdonald discussed the so-called Roman roads in Dumfriesshire in continuation of his general examination of the existing evidence for the authenticity of the various Roman roads in Scotland as laid down in the Ordnance Survey maps. The Dumfriesshire "Roman roads," of which only portions here and there can be pointed out, and of whose exact courses no two authorities are agreed, may be regarded as forming four sections—(1) the Lower Annandale, (2) the Upper Annandale, (3) the Nithsdale, and (4) the Cairn Valley roads. These he described and discussed in detail, showing how the belief that they were Roman arose in the last century, chiefly founded upon certain theories of the leading antiquaries of the time as to the movements of the Roman troops and the existence of so-called Roman camps or stations on the supposed lines of march or of communication. But these deductions had to be received with caution, and, before accepting the conclusion that all the roads that were thus theoretically assigned to the Roman military occupation were really of that time and origin, it was necessary not only to sift the literary evidence thoroughly, but to see what evidence could be obtained from the actual construction and characteristics of the roads and camps themselves.

FATAL ACCIDENT IN NORTON FOLGATE.—On Saturday last Mr. A. Hodgkinson held an inquest on the body of H. Pluck, who had been killed by the fall of a floor in Elder-street, Norton Folgate, on the 21st ult. Mr. Henry Lovegrove, District Surveyor of South Islington, Shoreditch, and Norton Folgate, produced a plan of the premises, and stated that some alterations had been made in the floor over a stable (he was informed about six years since), throwing the weight of a girder on two bearers 10 in. deep by 5 in. wide. One of the bearers had two saw-cuts in it, and both were in the first stage of decay. He considered that a sound piece of timber would not have broken with two or three times the weight of the girder placed upon it, but he thought the construction bad. Mr. W. Eve, F.S.I., architect to the owners, attended. Three men and thirteen horses were buried; one man was killed and two shaken; the whole of the horses were uninjured. Verdict—Accidental death.

LEGAL.

STRAND SUBSIDENCE CASE.

IN the Chancery Division on the 25th ult., Mr. Warmington, Q.C., mentioned the case of the Strand Board of Works *v.* Annan and others to Mr. Justice Kekewich.

The learned counsel stated that the case, which involved a very serious question, related to large building operations on the west side of a small street running from the Strand to the Embankment, called Carting-lane, and the plaintiffs alleged that by reasons of the excavations carried on by the defendants, who were excavating some 24 ft. to 40 ft. below the level of some parts of the lane, there had been a most extensive subsidence, in consequence of which the fire water-main protecting the Savoy Theatre had been burst. He suggested to his learned friend, Mr. Renshaw, Q.C., who represented the defendants, that their two surveyors should meet, and with the assistance of a third, to be appointed by his Lordship, and without prejudice to any questions which might possibly arise hereafter, inspect the property and order what work should be found necessary for the protection of the surrounding property, to be executed.

Mr. Renshaw, Q.C., on behalf of the defendants, consented to the suggestion of his learned friend, and remarked that his clients were every hour strengthening the supports, as they had finished the excavations and were then building up the concrete.

His Lordship acted on the suggestion of the learned counsel, and appointed Mr. Harris to act as the third surveyor.

CAPITAL AND LABOUR.

THE DISPUTE IN THE SOUTHPORT BUILDING TRADE.—The 180 bricklayers' labourers who recently went on strike in Southport for an advance to 6½d. an hour, are returning to work at 6d. all round, instead of 5½d. generally, and 6d. in a few places, which obtained before.

MEETINGS.

SATURDAY, JUNE 2.

Architectural Association.—First Summer Visit, to the Houses of Parliament and Westminster Abbey.

Incorporated Association of Municipal and County Engineers.—Western Counties' District Meeting, to be held at Torquay.

Northern Architectural Association.—Out-door Meeting at the Rutherford College, Newcastle, at 3 p.m.

Edinburgh Architectural Association.—Annual Excursion, to Culross and District.

Queen's College, Cork.—Mr. Arthur Hill on "The History of Architecture." XX. 3 p.m.

MONDAY, JUNE 4.

Society of Engineers.—Mr. Ed. C. de Segundo on "Power Distribution by Electricity, Water, and Gas." 7.30 p.m.

TUESDAY, JUNE 5.

Society of Engineers.—Visit to the South Metropolitan Gas Works, Old Kent-road, S.E.

Society of Biblical Archæology.—8 p.m.

WEDNESDAY, JUNE 6.

British Archæological Association.—(1) Mr. C. H. Compton on "Kirkham Priory and Waldon Abbey." (2) Mr. F. H. Williams on "The Discovery of a Roman Building at Chester." (3) Mr. Andrew Oliver on "Monumental Brasses." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the Members. 8.30 p.m.

THURSDAY, JUNE 7.

Society of Antiquaries.—8.30 p.m.

Royal Institution.—Mr. W. M. Flinders Petrie on "Egyptian Decorative Art." III. 3 p.m.

FRIDAY, JUNE 8.

Royal Institution.—Mr. C. Vernon Boys on "The Newtonian Constant of Gravitation." 9 p.m.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

8,643.—INTERCEPTORS FOR SEWERS AND DRAINS: *W. Sykes.*—To dispense with the complicated arrangements in general use a ventilator, invert to manhole ventilators to drains and sewers are all combined in one piece. The appliance is made in stoneware, concrete, or iron.

9,542.—WATER-CLOSETS: *J. Day.*—According to this invention, special design and construction is arranged so as to prevent scrubbing-brushes, tin canisters, and such like articles from passing through the bottom of the pan, to ensure that the pan will be cleansed by the flow of water used for flushing the closet, and to facilitate the clearing or unstopping of the drain when necessary. The means to these ends are set forth in a lengthy specification.

10,103.—PLASTER BOARD FOR WALLS AND CEILINGS: *J. D. Baker and another.*—The plaster board is formed of a plaster facing and backing, having a sunken face between two of its edges and strips of textile fabric secured in its other two edges between the backing and facing and adapted to lie in the sunken faces of boards, which are secured together by a suitable plaster filling.

11,325.—REVERSIBLE SASH: *J. Lambert.*—The sashes are hung without weights, the cord passing over a pulley and being attached to each sash separately. The removal of a small tongue-piece allows the sashes to be turned inwards for cleaning.

12,023.—PAINT MIXERS: *J. H. Hind.*—In paint-mixing machines an inner and an outer set of vertically arranged blades are caused to rotate in opposite directions within the interior of a pan, and slotted ears or lugs are provided to allow the blades and mechanism to be easily withdrawn.

12,639.—CHANNEL BLOCKS, &c.: *E. A. Green.*—These blocks, which are to be used as reducing couplings to drain-pipes, &c., and for similar purposes, are made in one piece of earthenware, and channels are made at the sides of the blocks, to be utilised for various purposes.

23,729.—WINDOW-SASHES: *J. Hay.*—The windows are made in the ordinary way, but with retaining strips, which are removed when the window is to be reversed for cleaning or other purposes.

1,507.—RAISING SASHES, &c.: *W. Gibbin.*—The frame is made of solid deal, and the sash is rebated, and has a metal cogged bar, by which the sash is raised and lowered, a bevel-edged wheel works in the cogged bar to work the sashes without cords or weights.

NEW APPLICATIONS FOR LETTERS PATENT.

MAY 15.—9,506, C. Newton, Saw-grinding Machines.—9,507, D. Morgan, Flushing Stench-traps, &c., principally applicable to Water-closets and Sinks.—9,517, M. Tibbitts, Draught Creator and Gas-lamp combined for Ventilating Sewer-shafts.—9,519, T. Cosham, Filtering Beds.—9,523, J. Childs, Revolving Cowls for Chimneys and Ventilating-shafts.—9,545, A. Banchêre, Continuous or Running Kilns for Burning Lime, Cement, &c.—9,546, H. Hoddan, Kilns.

MAY 16.—9,552, J. Penwill, Drain Trap.—9,556, R. Robson, Down-draught Preventer for Chimneys.—9,564, T. Robinson, Connecting Metal Pipes to Earthenware Drain-pipes, Water-closet Basins, or Traps.

MAY 17.—9,655, J. MacArthur, White Lead.—9,682, A. Schmeil and P. Saar, Skylights.—9,684, J. Foote, Window-sashes.—9,702, P. Knobel, Angle or Square.

MAY 18.—9,735, A. Boult, Ventilators or Blowers.—9,745, G. Garrad, Tiles.—9,756, C. Waddell, Operating and Automatically Locking Sash-windows.

MAY 19.—9,773, T. Atkins, Water Waste-preventer Cisterns.—9,774, W. Young, Hanging Window-sashes.—9,784, J. Jackson, Window-sashes.

PROVISIONAL SPECIFICATIONS ACCEPTED.

6,379.—A. Hunter, Window Lock.—7,111, G. Copping, Scaffolding.—7,415, W. and T. Fox, Joiners' or other Crank Braces with Loose Head and Handle.—7,776, C. Challis, Gratings or Strainers for Sinks, Drains, &c.—7,812, C. Kinnell, Actuating Ventilators.—7,840, G. Farini, Door-closers.—8,257, W. Ross, Junr., Siphons for Water-closet and other Cisterns.—8,453, W. Connell, Regulating Fanlights and Skylights.—8,883, O. Charney, Screws.—8,910, J. Bouhon, Ventilators.

COMPLETE SPECIFICATIONS ACCEPTED.

(Open to Opposition for Two Months.)

12,065, C. Stockwell and P. Smith.—Siphon Tank for Flushing Water-closets.—13,828, F. Cobb and A. Oldham, Sash Fasteners.

CONTRACTS AND PUBLIC APPOINTMENTS.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.
Additions to Schools, Crosby Villa, Maryport	Rev. W. J. Marsh	G. D. Oliver	June 5
Additions to Schools, Moor-row, Cmbrland	Egremont School Bd.	G. Boyd	do.
Shops, Galway	Robt. Blake	W. H. Byrne	do.
Pipe Sewer, Roslin-street and Park-road	Aberdeen T.C.	W. Dyack	do.
Wesleyan Church and School, Rowrah, Cumberland		A. Huddart	June 6
Two Houses, Bryn Estate, Ruabon	K. Kenrich		do.
*Road Works	Chiswick Loc. Bd.	A. Ramsden	do.
Pipe Sewers, &c. (1,000 yards) Kincardine O'Neil, N.B.	Jno. Murray	Jenkins & Marr	do.
Paving, Flagging, &c. Brinckman-street	Barnsley T. C.	J. H. Taylor	do.
Sewers, Tong and Darcy Lever	Bolton R.S.A.	Mr. Atherton	do.
Flags (800 yards) North-road	Ravensthorpe (Yorks.) Loc. Bd.	T. Hemingway	do.
Road Works, Percy and Bridge-roads	Solihull U.R.S.A.	A. E. Currall	do.
Paving Setts (550 sq. yds.), Stockport-road	Levenshulme Loc. Bd.	*Official*	do.
Flint Road Metal (1,000 tons)	Burgess Hill (Sussex) Loc. Bd.	do.	do.
Granite and other Road Metal	Poole T.C.	J. Elford	June 7
Drainage, &c. Workhouse	Hastings Union	Jeffery & Skiller	do.
Hospital Works, Roads, &c.	Plymouth Corp.	G. D. Bellamy	do.
Addition to Stores	Netherton Co-op. Soc.	Geo. Kaye	do.
*Scavenging, Dusting, and Watering	St. Matthew's Vestry, Bethnal Green	T. W. Barratt	do.
Schools, near Arundel	Lyminster School Bd.	*Official*	do.
*Workmen's Dwellings	Richmond Town Coun.	do.	June 8
Workshops at Gasworks, Thomas-street	Birkenhead Corp.	T. O. Paterson	do.
*Slit Destructor Cells, &c.	Toxteth Park Loc. Bd.	J. Price	do.
Cemetery House, &c.	Mid-Calder (N.B.) Parochial Board	J. W. Hislop	do.
Wesleyan Chapel and Room, Fletcher Town, Mealsgate	Tate Bros.		June 9
Shop, Saleroom, &c. Lapstone-road, Millom, Cumberland	T. Richards	W. G. Scott	do.
Welsh Baptist Chapel, Ebbw Vale, Wales	Rev. J. A. Evans	T. Roderick	do.
*Residence, Stables, &c.	Captain Dibley	C. H. Burstow	do.
*Machine and Carriage Sheds	Rhondda & Swansea Bay Railway	*Official*	do.
Forty Dwellings	Stretford Local Board	do.	June 11
Granite Road Metal (2,000 yards)	Southall-Norwood Loc. Bd.	do.	do.
*Paving New Street	Camberwell Vestry	O. S. Brown	do.
*Stoneware Pipes, Gullys, &c.	West Ham Corp.	L. Angell	June 12
*Structural Works at Infirmary	Whitechapel Union	B. J. Capell	do.
*Painting, &c. at Infirmary	St. George's Union	H. Saxon Snell	do.
*Making-up Roads	Tottenham Loc. Bd.	P. E. Murphy	do.
*Oils, Colours, &c.	Southwark Vestry	*Official*	do.
*Wood Paving Works	Commrs. of Sewers (City of London)	do.	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.
*Enlargement of P. O., Stockton-on-Tees	Com. of H.M. Works	*Official*	June 12
Pipe Sewer, near Barnsley	Hemsworth U.R.S.A.	Mr. Richardson	do.
Bridge over River Goyt	Stockport Corp.	Jno. Atkinson	do.
*Gully Grates, Manhole Covers, &c.	Hackney Vestry	*Official*	June 13
*Additional Blocks, Eastern Hospital	Met. Asylums Board	A. & C. Harston	do.
Schools, Rose-street	Gateshead School Bd.	Thompson & Dunn	do.
*Electric Lighting Station	Coventry Corporation	G. & I. Steane	do.
*Covered Service Reservoir	South Hants Waterworks Co.	*Official*	June 14
Dwelling-house, Hook Tower Lighthouse, Co. Wexford	Commissioners of Irish Lights	do.	June 15
*Enlargement of Post Office, Hanley, Staffs.	Com. of H.M. Works	do.	June 16
Club Premises, Kingston Ward	Halifax Liberal Club	M. Hall	do.
*Officers' New Quarters, &c.	Westminster Union	Waldram & Son	June 22
*Strong Room at County Hall	Breconshire County Council	*Official*	June 23
Forming, Draining, &c. Selston	Basford R.S.A.	Samuel Taylor	June 25
*Broken Granite	Hanwell Loc. Bd.	*Official*	do.
*Stone Coping	Tottenham Local Board	P. E. Murphy	June 26
*Iron Fencing	do.	do.	do.
Additions to Farmhouse, Norton-le-Clay, near Boroughbridge	F. J. Judson	H. E. & A. Bown	No date
Church, Grelna		T. Taylor Scott	do.
Additions to Schools, Pennington, Ulverston		J. W. Grundy & Son	do.
Three Houses, Stonepholme, near Burnley, Lancashire		J. Butterfield & Son	do.
Reservoir, Bleach Works, Tottington	R. K. Roberts	T. Nuttall	do.
Manufactory, &c. Blaenavon, Abergavenny	Lewis Richards	E. A. Johnson	do.
*New Factory, Rushden	Green & Son	H. Adnitt	do.
Three Houses and Shops, Menston, near Bradford		W. H. Sharp	do.
*Painting Works, Preston	War Department	*Official*	do.
*Painting Works, &c. Gosport	do.	do.	do.
*Erection of The Princes, Blackpool	The Directors	J. D. Harker	do.
House, Millom, Cumberland	H. Frankland Fox		do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Three Sanitary Inspectors	St. Mary, Newington, Vestry	100*l.* &c.	June 4
*Secretary and General Manager	Alleyn's College, Dulwich	300*l.* to 400*l.*	No date

Those marked with an asterisk (*) are advertised in this Number. *Contracts, pp.* iv., vi., *and* viii. *Public Appointments, p.* xx. *and* xxiii.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

MAY 21.—By *R. A. Notley:* "St. Keyne," Worple-rd., Wimbledon, f., 1,050*l.*—By *Levens, Son, & Hoare:* "Fairview," Knoll-rd., Beckenham, u.t. 71 yrs., g.r. 25*l.*, 1,700*l.*—By *Weatherall & Green:* 13, Elvaston-pl., Kensington, u.t. 57 yrs., g.r. 2*l.*, r. 220*l.*, 3,050*l.*; "Laurel Cottage," Grove-st., Holloway, f. and l., 620*l.*; 17, Sutherland-av., Maida Hill, u.t. 69 yrs., g.r. 12*l.*, r. 75*l.*, 540*l.*—By *E. Simpson:* 39, Clifton-rd., Peckham, u.t. 52 yrs., g.r. 9*l.* 10*s.*, 360*l.*; 11, Linden-grove, Nunhead, u.t. 54 yrs., g.r. 8*l.*, 425*l.*; 70, Forthbridge-rd., Clapham, u.t. 96 yrs., g.r. 7*l.* 10*s.*, 305*l.*; 74, 76, Inville-rd., Walworth, u.t. 56 yrs., g.r. 8*l.*, 520*l.*—By *White, Druce, & Brown:* The f. residence "Springfield," Godstone, and 14 a. 0 r. 25 p., 5,600*l.*—By *Dolman & Pearce:* 51 to 57 (odd), Marsden-st., Kentish Town, u.t. 51 yrs., g.r. 25*l.* 6*s.*, r. 159*l.*, 1,370*l.*; 67, 69, Marsden-st., u.t. 54 yrs., g.r. 12*l.* 12*s.*, r. 84*l.*, 640*l.*—By *J. H. Hibbard:* 83, Charlotte-st., Tottenham-Ct.-rd., f., 2,350*l.*; 16, 18, Folkestone-rd., Edmonton, u.t. 92 yrs., g.r. 7*l.* 7*s.*, 155*l.*; 24, Vernon-rd., Hornsey, u.t. 85 yrs., g.r. 6*l.*, 200*l.*; 48, The Cres., Stamford Hill, u.t. 65 yrs., g.r. 5*l.*, 170*l.*; 64a, 66, 68, Londesborough-rd., Stoke Newington, u.t. 70 yrs., g.r. 12*l.*, 615*l.*; 5, 7, Albion-st., Lewisham, u.t. 68 yrs., g.r. 10*l.*, r. 60*l.*, 425*l.*—By *Green & Son:* 39 to 47 odd, Lausanne-rd., Peckham, u.t. 82 yrs., g.r. 33*l.* 6*s.* 8*d.*, r. 150*l.*, 1,245*l.*; 1 to 4 and 7, Deerbrook-rd., Tulse Hill, u.t. 64 yrs., g.r. 47*l.* 5*s.*, r. 200*l.*, 1,330*l.*; 8 to 14, ditto, u.t. 64 yrs., g.r. 58*l.* 16*s.*, r. 266*l.*, 1,710*l.*; 48 to 70, Romolo-rd., u.t. 64 yrs., g.r. 103*l.* 19*s.*, r. 479*l.*, 3,140*l.*

MAY 22.—By *G. Joslin:* 29, Elgin-ter., Maida Vale, u.t. 68 yrs., g.r. 7*l.*, 375*l.*—By *W. P. Goulding:* 115, Petherton-rd., Highbury, u.t. 55 yrs., g.r. 7*l.* 7*s.*, r. 60*l.*, 540*l.*—By *Debenham, Tewson, & Co.:* 10, Pembridge-pl., Bayswater, f., 2,250*l.*—By *Messrs. Mellersh:* An enclosure of f. land, Witley, Surrey, 6 a. 2 r. 14 p., 750*l.*; a plot of c. heathland, Headley, Hants, 7 a. 1 r. 10 p., 145*l.*—By *E. & H. Lumley:* 46, 50 to 56 (even), James-st., Oxford-st., f., r. 400*l.*, 7,530*l.*—By *W. Houghton:* 1, 2, Sylvan Villas, Woodford, f., r. 80*l.*, 775*l.*; 3 to 7, Sylvan Villas, f., r. 130*l.*, 1,560*l.*; a plot of f. land, Globe-rd., 125*l.*; "Stafford House," Stafford-rd., East Ham, f., 380*l.*—By *W. P. Goulding* (at Walthamstow): Four plots of f. land, Lea Bridge-rd., Leyton, 290*l.*; two plots of f. land, Malta-rd., 86*l.*

MAY 23.—By *Hobson, Richards, & Co.:* Block of artisans' dwellings, "White Horse Alley," West Smithfield, u.t. 62 yrs., g.r. 30*l.*, 300*l.*—By *Daniel Smith, Son, & Oakley:* 53 to 61 odd, 62 to 98 even, Albany-rd., Old Kent-rd.; 1 to 11 odd, Odell-rd.; and 51 to 61 odd, and 58 to 70 even, Bagshot-rd.; f., r. 1,703*l.* 7*s.*, 15,500*l.*; i.g.r. of 211*l.* 2*s.*, Elmore-st., Almorah-rd., and Charles-st., Islington, u.t. 58 yrs., g.r. 15*l.*, 3,400*l.*—By *Baxter, Payne, & Lepper:* 15, Lyndhurst-rd., Peckham, f., r. 38*l.*, 450*l.*; 86, Ramsden-rd., Balham, f., r. 32*l.*, 365*l.*; f.g.r. of 6*l.*, Ramsden-rd., reversion in 78 yrs., 130*l.*; f.g.r. of 20*l.*, Langton-rd., Camberwell, ditto in 73 yrs., 460*l.*; f.g.r. of 10*l.*, George-st., Gipsy Hill, ditto in 79 yrs., 210*l.*; f.g.r. of 45*l.* 18*s.*, ditto in 56 yrs., 1,020*l.*; f.g.r. of 15*l.*, Woodland-rd., Norwood, ditto in 56 yrs., and the reversion to 57, Woodland-rd., 360*l.*; f.g.r. of 40*l.*, Eden-rd., Beckenham, reversion in 80 yrs., 764*l.*; i.g.r. of 14*l.* 8*s.*, Coldharbour-lane, Brixton, u.t. 28 yrs., g.r. 3*l.* 18*s.*, 110*l.*—By *Rushworth & Stevens:* 15, 16, Cullum-st., City of London, f., r. 385*l.*, 6,750*l.*; 17, Cullum-st., f., r. 300*l.*, 5,430*l.*; No. 8, Corporation lease, New Bond-st., r. 450*l.*, 12,500*l.*; an i.g.r. of 67*l.*, and an improved renewal fine of 370*l.* every 14 yrs., 3,150*l.*; Corporation lease, 17, Stratford-pl., Oxford-st., r. 180*l.*, 3,750*l.*; set of chambers, H2, Albany, Piccadilly, subject to fee farm rent, 35*l.*, and repair rate 12*l.*, 205*l.*

MAY 24.—By *Rolls & Lawrence:* 58, Battersea Rise, Battersea, u.t. 86 yrs., g.r. 12*l.*, r. 55*l.*, 510*l.*—By *Bance, Talbot, & Co.:* 41, Mercer's-ter., Limehouse, u.t. 32 yrs., g.r. 4*l.*, r. 24*l.*, 220*l.*—By *Mullett, Booker, & Co.:* 9, Hyde Pk.-ter. and stabling, Hyde Park, u.t. 29 yrs., g.r. 50*l.*, 7,600*l.*—By *C. C. & T. Moore:* 42, 44, Station-rd., Forest Gate, f., r. 72*l.*, 1,010*l.*; 2, 32, 33, Blanchard-rd., Hackney, u.t. 53 yrs., g.r. 15*l.*, 555*l.*; 13, 14, King John-st., Stepney, u.t. 49 yrs., g.r. 7*l.* 10*s.*, 350*l.*; 17, Strahan-rd., Bethnal Green, u.t. 56 yrs., g.r. 5*l.*, 225*l.*; 115, Whiston-st., Haggerston, u.t. 62 yrs., g.r. 6*l.* 5*s.*, 100*l.*—By *Beadel, Wood, & Co.:* A plot of f. land, 3 a., 0 r., 16 p., Holly-lane, Worplesdon, 100*l.*—By *Stimson & Sons:* 42, 43, Ernest-st., Bermondsey, u.t. 22 yrs., g.r. 6*l.* 8*s.*, 260*l.*; 96, 98, Coburg-rd., Old Kent-rd., u.t. 13 yrs., g.r. 10*l.*, r. 74*l.*, 175*l.*—By *Newbon & Co.:* 63, 69, to 75 odd, Barrett's Grove, Stoke Newington, u.t. 80 yrs., g.r. 35*l.*, r. 170*l.*, 1,345*l.*; 2 to 18 even, Barrett's Grove, u.t. 80 yrs., g.r. 69*l.* 8*s.*, r. 299*l.*, 2,410*l.*—By *H. J. Bliss & Sons:* 208, Green-st., Bethnal Green, f., r. 26*l.*, 550*l.*; 40, 59, Moss-st., f., 320*l.*; 125, 137, Green-st., f., r. 73*l.*, 1,010*l.*—By *Debenham, Tewson, & Co.:* 104, Crouch Hill, Hornsey, f., r. 135*l.*, 2,200*l.*; f.g.r. of 6*l.* 10*s.*, Fairfield-rd., reversion in 93 yrs., 160*l.*; 16, Cecile Pk., u.t. 87 yrs., g.r. 10*l.*, r. 60*l.*, 500*l.*; 28, 34, 40, Weston Pk., u.t. 87 yrs., g.r. 30*l.*, r. 157*l.* 10*s.*, 1,300*l.*

MAY 25.—By *R. W. Mann & Son:* 2, King's-pl., Camden Town, u.t. 55 yrs., g.r. 2*l.*, r. 26*l.*, 200*l.*—By *W. B. Hallett:* Nos. 18, 20, 22, Lambeth Walk, u.t. 91 yrs., g.r. 60*l.*, 690*l.*—By *A. A. Hollingsworth:* 94, Claremont-rd., Forest Gate, u.t. 88 yrs., g.r. 8*l.* 16*s.*, 490*l.*; 1 to 9, Gladstone-ter., u.t. 82 yrs., g.r. 28*l.* 7*s.*, 985*l.*; 63 to 73 (odd), Field-rd., u.t. 73 yrs., g.r. 15*l.*, 565*l.*; 57 to 69 (odd), Station-rd., u.t. 82 yrs., g.r. 24*l.* 10*s.*, 930*l.*—By *Robert Reid:* 175, 176, New Bond-st., f., r. 1,250*l.*, 30,000*l.*—By *Bray, Dickins, & Co.:* 7, Tubbs Row, Harlesden, u.t. 87 yrs., g.r. 5*l.*, 230*l.*; 31, Kemble-rd., Forest Hill, u.t. 83 yrs., g.r. 6*l.*, r. 28*l.*, 175*l.*—By *Ball, Norris, & Hadley:* 35, Princess-rd., Regent's Pk., u.t. 58 yrs., g.r. 6*l.* 18*s.*, r. 45*l.*, 435*l.*; 40, 42, Hannell-rd., Fulham, u.t. 84 yrs., g.r. 8*l.* 8*s.*, 350*l.*—By *Baker & Sons:* "Bedfont House" and 5 a. 1 r. 26 p., Bedfont, f., r. 80*l.*, 1,630*l.*; an enclosure of f. market garden land, 2 a. 2 r. 38 p., 200*l.*; "The Limes," Avenue-rd., New Southgate, f. 905*l.*; 19 plots of f. land, Cross-rd., Avenue-rd., and Belstile-rd., 1,408*l.*—By *H. J. Bromley:* "Eaglesmere," Trinity-rd., Tulse Hill, f., 1,150*l.*; f.g.r. of 58*l.* 16*s.*, Pk.-rd., Dulwich, reversion in 70 yrs., 1,470*l.*; f.g.r. of 7*l.*, Rosendale-rd., ditto in 48 yrs., 195*l.*; f.g.r. of 29*l.* 14*s.*, ditto in 59 yrs., 760*l.*; f.g.r. of 35*l.*, ditto in 65 yrs., 895*l.*; f.g.r. of 19*l.*, ditto in 65 yrs., 505*l.*; f.g.r of 12*l.* 10*s.*, ditto in 69 yrs., 335*l.*; Nos. 85, 87, Rosendale-rd., f., r. 80*l.*, 800*l.*; f.g.r. of 20*l.*, Park-rd., reversion in 69 yrs., 530*l.*; f.g.r. of 40*l.*, ditto in 65 yrs., 1,050*l.*; 10, Park-rd., f., r. 55*l.*, 650*l.*—By *Reynolds & Eason:* L.g.r. of 64*l.* 6*s.*, Exmouth-st., Clerkenwell, u.t. 21 yrs., g.r. 28*l.*, 415*l.*; l.g.r. of 60*l.*, Merlin-pl. and Margaret-st., u.t. 21 yrs., g.r. 18*l.*, 430*l.*; l.g.r. of 144*l.*, Noble-st., u.t. 21 yrs., g.r. 6*l.*, 930*l.*; l.g.r. of 258*l.*, Wilmington-sq., &c., u.t. 21 yrs., g.r. 12*l.*, 2,630*l.*; l.g.r. of 94*l.* 10*s.*, Eastern-st., u.t. 21 yrs., g.r. 6*l.* 10*s.*, 790*l.*; l.g.r. of 110*l.* 10*s.*, Wilson-st., u.t. 17 yrs., g.r. 30*l.* 10*s.*, 460*l.*; l.g.r. of 85*l.*, Wilmington-pl., &c., u.t. 21 yrs., g.r. 5*l.*, 690*l.*; l.g.r. of 64*l.*, Marchmont-st., u.t. 11 yrs., g.r. 13*l.* 13*s.*, 185*l.*; l.g.r. of 75*l.*, Gray's Inn-rd., u.t. 17 yrs., g.r. 15*l.*, 375*l.*; l.g.r. of 80*l.*, Chapel-pl., Belgravia, u.t. 15 yrs., g.r. 10*l.* 11*s.* 8*d.*, 380*l.*; l.g.r. of 130*l.*, Chapel-st., u.t. 16 yrs., g.r. 18*l.* 18*s.*, 870*l.*; l.g.r. of 84*l.*, u.t. 16 yrs., g.r. 63*l.*, 620*l.*; l.g.r. of 35*l.*, Chapel Mews, u.t. 16 yrs., g.r. 10*s.*, 260*l.*; l.g.r. of 17*l.*, Netley-st., Hampstead, u.t. 21 yrs., g.r. 5*l.*, 130*l.*; l.g.r. of 13*l.* 15*s.*, Greenwood-rd., Dalston, u.t. 57 yrs., g.r. 10*l.*, 65*l.*; l.g.r. of 190*l.* 10*s.*, u.t. 57 yrs., no g.r., 2,880*l.*; l.g.r. of 163*l.*, u.t. 57 yrs., no g.r., 3,105*l.*; the lease of Nos. 102, 104, Stamford Hill, u.t. 48 yrs., 5*l.*

[*Contractions used in these Lists.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.]

PRICES CURRENT OF MATERIALS.

TIMBER.		
Greenheart, B.G. ton	8/0/0	0/0/0
Teak, E.I. ..load	10/0/0	16/0/0
Sequoia, U.S.ft.cu	2/3	2/6
Ash, Canada load	2/15/0	4/0/0
Birch, do	2/5/0	3/10/0
Elm, do	3/10/0	4/15/0
Fir, Dantsic, &c.	1/5/0	3/5/0
Oak, do	2/10/0	4/15/0
Canada	5/10/0	7/0/0
Pine, Canada red	2/10/0	3/0/0
Do. Yellow	2/10/0	4/15/0
Lath, Dantsic, fath	4/10/0	5/10/0
St. Petersburg	5/0/0	6/10/0
Wainscot, Riga, &c., log	2/5/0	4/10/0
Odessa, crown	2/5/0	4/10/0
Deals, Finland 2nd & 1st std 100	8/0/0	10/10/0
Do. 4th & 3rd	7/10/0	9/0/0
Do. Riga	7/10/0	9/0/0
St. Petersburg, 1st yellow	10/0/0	13/10/0
Do. 2nd yellow	8/0/0	9/0/0
Do. white	8/10/0	11/0/0
Swedish	8/10/0	16/10/0
White Sea	8/0/0	16/10/0
Canada, Pine 1st	22/10/0	29/0/0
Do. do. 2nd	17/0/0	18/0/0
Do. do. 3rd, &c.	7/10/0	10/5/0
Do. Spruce, 1st	9/0/0	11/0/0
Do. do. 3rd & 2nd	6/10/0	7/10/0
New Brunswick	6/0/0	7/5/0
Battens, all kinds	8/0/0	15/0/0
Flooring boards, sq., 1 in. prep. 1st	0/10/0	0/13/0
Do. 2nd	0/7/6	0/13/0
Other qualities	0/5/0	0/7/0
Cedar, Cuba .. ft.	1/3	1/4
Honduras, &c.	1/3	1/4
Mahogany, Cuba	1/3	1/6
St. Domingo, cargo av.	1/3	1/6
Mexican do. do.	1/3	1/4
Tobasco do. do.	1/3	1/6
Honduras do.	1/3	1/5
Box, Turkey ton	4/0/0	12/0/0
Rose, Rio	7/0/0	18/0/0
Bahia	6/0/0	17/0/0
Satin, St. Domingo	0/0/5	0/1/0

TIMBER (*continued*).		
Satin, Porto Rico	0/0/6	0/1/6
Walnut, Italian	0/0/3½	0/0/7
METALS.		
Iron—Pig, in Scotland ton	2/1/3	0/0/0
Bar, Welsh, in London	5/17/6	6/0/0
Do. do. at works in Wales	5/7/6	5/10/0
Do. Staffordshire, in London	6/0/0	6/10/0
COPPER—British cake and ingot	41/0/0	41/10/0
Best selected	42/0/0	42/10/0
Sheets, strong	50/0/0	0/0/0
Chili, bars	39/1/3	39/6/3
YELLOW METAL lb	0/0/4½	0/0/5
LEAD—Pig, Spanish ton	9/2/6	0/0/0
English com. brands	9/3/9	0/0/0
Sheet, English, 6 lbs. per sq. ft. and upwards	10/15/0	0/0/0
Pipe	11/5/0	0/0/0
ZINC—English sheet ton	19/0/0	19/0/0
Vieille Montagne	19/10/0	0/0/0
TIN—Straits	72/0/0	72/10/0
Australian	72/10/0	73/0/0
English Ingots	75/0/0	75/10/0
Banca	76/0/0	76/10/0
Billiton	72/0/0	72/10/0
OILS.		
Linseed ton	20/12/6	20/15/0
Cocoanut, Cochin	28/10/0	29/0/0
Do. Ceylon	24/0/0	0/0/0
Palm, Lagos	23/10/0	0/0/0
Rapeseed, English pale	21/10/0	21/15/0
Do. brown	19/10/0	0/0/0
Cottonseed ref.	21/0/0	21/15/0
Oleine	22/0/0	24/0/0
Lubricating, U.S.	4/0/0	5/0/0
Do. refined	5/0/0	12/0/0
TAR—Stockholm barrel	0/22/0	0/0/0
Archangel	0/11/0	0/0/0

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursday.*]

BALLINCOLLIG (Ireland).—For the erection of soldiers' institute. Mr. W. H. Hill, architect, 28, South Mall, Cork. Quantities by Mr. E. B. McSweeny, Marlboro-street, Cork:—

R. W. Johnson	£1,297	Terence O'Flynn	£968
John Lisk	1,170	D. Forde	950
Saml. Hill	1,125	D. O'Callaghan	930
Walter Murphy	1,018	D. Duffan, Cork (accepted)	915
E. & P. O'Flynn	1,005		

BODMIN.—For the erection of residence, school buildings walls, &c., for Mr. John H. Stranger. Mr. Wm. J. Jenkins, architect, Bodmin. No quantities :—

Goad & Co.	£3,570	James Julian	£1,950
Stephens & Son	2,580	Brown & Grose, Bodmin*	1,900
Rowe & Scantlebury	2,300	* Accepted.	

BRISTOL.—For the construction of four roads, Totterdown, for the Bedminster Union Guardians. Mr. J. Maynard Froud, surveyor. Quantities by surveyor :—

	Three Streets.			Haverstock-road.		
T. Lucas	£816	3	0½	£199	9	3
C. Bradshaw & Sons	816	1	5	223	14	1
M. Durnford	809	7	7	207	7	10
T. J. Beaven	787	3	6	236	9	0
W. T. & T. R. Mereweather	749	0	0	211	0	0
J. Perkins	692	0	0	196	0	0
W. Hickery	686	6	0	181	0	0
J. Durnford & Son	666	17	6	190	18	10
Aaron & Rendall	—			398	2	0
W. Hurford (accepted)	632	13	0	172	7	9

CARDIFF.—For the supply of granite for overflow weir and reservoir (No. 1), for the Corporation. Mr. J. A. B. Williams, C.E., Queen's Chambers, Queen-street, Cardiff :—

The Shap Granite and Patent Concrete Co.	£2,098 2 6	W. Hosken & Co., John Freeman, Sons, & Co., Ltd., Penryn (accepted)	£1,198 9 1
Chas. Bolt & Sons	1,206 19 5		1,189 5 3

CARDIFF.—Accepted for new south aisle and porch to St. Saviour's, Church-road, Cardiff. Messrs. Bodley & Garner, architects. Quantities by Messrs. Northcroft, Son, & Neighbour, London :—

Stephens, Bastow, & Co., Limited, Bristol £1,900 0 0

CHATHAM.—Accepted for the supply of various kinds of road materials, for the Corporation. Mr. Chas. Day, Borough Surveyor, Corporation Offices, Military-road, Chatham :—

Kentish Rag Stone.

	£	s.	d.	
Bensted & Son, Maidstone	0	7	2	250 yards, New-road.
Geo. West, Rochester	0	7	0	100 yards, Corporation Yard.
	0	7	4	150 ,, Maidstone-road.

Cherbourg Granite.

Burford Sampson, jun., Chatham ..... 0 11 9 200 tons, Maidstone-road.

Cherbourg Granite, Headers Quartzite.

L. Sommerfeld, 2, Fowkes Buildings, E.C. ..... 1 12 6 50 tons, Corporation Yard.

Guernsey Granite.

Muir & Co., 8, St. Benet-place, E.C. ..... 0 12 0 300 tons, 2-in., Corporation Yard.

Granite Chippings.

Muir & Co., 8, St. Benet-place, E.C. ..... 0 9 6 60 yards, Corporation Yard

Guernsey Granite.

William Griffith	0 12 5½	400 tons, 1½ in.,	Corporation Yard.
	0 11 11½	200 tons, 2-in.,	Corporation Yard.

CONGLETON (Cheshire).—For the erection of two houses, Mossley, for Mr. A. B. Lownds. Mr. Elijah Jones, architect, 10, Albion-street, Hanley. Quantities by architect :—

Beech & Brooks	£1,275	Thos. Brown	£1,040
W. Proctor	1,050	John Worrall	990
J. Kearton	1,046	Thos. Godwin, Hanley*	980
Jos. Worrall	1,042	* Accepted.	

CORK.—For erecting new premises, for Messrs. Maguire & McNeely, South Mall, Cork. Mr. W. H. Hill, architect, Cork :—

S. Scully	£2,293	John Lisk	£1,970
W. O'Connell	2,197	J. Delany	1,869
Horgan & Daly	2,146	J. McDonnell	1,847
T. O'Flynn	2,034	D. O'Callaghan	1,827
Collen Bros.	2,000	Saml. Hill, Cork (accepted)	1,685

CROYDON.—For alterations, No. 7, North End, for Mr. W. E. Wilson. Mr. Alfred Broad, architect, Dingwell-road, Croydon :—

E. P. Bulled & Co.	£690	D. W. Barker	£571
G. E. Bryan & Son	599	Hanscomb & Smith, Croydon (accepted)	515
S. Page	598		
E. J. Saunders	585		

DESBOROUGH.—For working men's club and institute to be erected at Desborough, Northamptonshire. Plans and specifications prepared by Mr. O. Pemberton, Desborough, who is also appointed clerk of the works :—

J. Buckly	£558 10	J. Dawkins, Desborough*	£535 0
		*Accepted.	

DUDLEY.—For the erection of a new vicarage house at Reddall Hill, near Dudley, for the Rev. E. A. Cooke. Messrs. M. H. Linklater & E. Turner, joint architects, Bank Buildings, Leicester :—

Joseph M. Tate	£2,200	H. Smith	£2,044
Joseph F. Bloomer	2,058	W. Willets	2,033
H. Dorse & Co.	2,050		

EASINGWOLD (Yorks.). — Accepted for the erection of dwelling house, Crankley Farm. Mr. A. A. Stott, architect, Heckmondwike. Quantities by architect :—

Excavators', Masons', and Bricklayers' work.—Mr. Thomas Poppleton, Easingwold	£540
Carpenters' & Joiners' work.—Mr. Thomas Hartley, Easingwold	
Plasterer & Glaziers' work.—Messrs. E. Walker & Co., Heckmondwike	
Plasterer's' work.—Mr. William Parker, Heckmondwike	
Slaters' work.—Mr. Jonas M. Thornton, Heckmondwike	

EAST GRINSTEAD.—For the supply of (1) Kentish rag, 300 yards; (2) Quenast stone, 50 yards; and (3) hand-picked surface flints, 1,000 yards, for the Local Board. Mr. W. W. Gale, Town Surveyor, Local Board Offices, East Grinstead :—

Quenast Stone.

	Per ton. s. d.
Chas. M. Manuelle, 12, Lime-street, E.C.*	13 6

Kentish Rag Stone.

	Per ton. s. d.
W. H. Benstead & Sons, Maidstone*	8 4
Joseph S. Gabriel	Informal.
W. Hudson	8 9

Hand-picked Surface Flints.

	Per yard. s. d.
T. & W. Scott, Warlingham*	7 9
W. Hudson	7 9
Hall & Co.	Informal.
* Accepted.	

ELY (Cambs.).—Accepted for the supply of Clee Hill stone and Leicestershire granite, for the Local Board. Mr. Wm. McKelvie, Surveyor, Ely :—

Granite.

	Per ton. s.	d.	
Clee Hill Granite Co., Ludlow, Salop	14	7	1½ in. hand broken.
Do. do. do.	12	6	1 in. chippings.
Croft Granite Co., Leicester	10	0	1½ in. broken.
Do. do.	7	0	screenings.
Whitwick Granite Co., Leicester	10	0	1½in. and 1¼in. broken.
Do. do.	7	4	¼in. to ¼in. screenings.

Gravel.

	Per cubic yard. s. d.
J. M. Place, Gakenheath	5 3
Eastern Counties Navigation, Cambridge	4 3

IPSWICH.—For additions, &c., to school buildings, California, for the School Board. Mr. T. W. Cotman, architect, Northgate-street, Ipswich :—

S. & A. Kenney	£2,094	F. Burnett	£1,010
Girling & Coe	1,997	Parkington & Son	1,894

KEYNSHAM (near Bristol).—For building new parish school. Mr. E. H. Lingen Barker, architect, London :—

Stephens, Bastow & Co.	£995 0 0	G. Humphreys	£879 0 0
W. Church	979 0 0	Love & Waite	875 0 0
J. S. Kimberley	960 0 0	Cowlin & Son	873 0 0
C. Edwards	955 0 0	J. Perkins	850 0 0
Brock & Son	950 0 0	Wall & Hook	843 0 0
H. A. Forse	920 0 0	T. Colborne	830 16 0
King & Son	889 0 0	J. Hyde, Keynsham*	810 14 4
E. Harvey	885 16 0	E. Chancellor	769 16 7
		H. J. Rossiter	750 0 0
		* Reduced and accepted.	

LONDON.—For rebuilding "The George" public-house, Tower Hill, E.C., for Mr. Wm. Chapman. Mr. J. W. Brooker, architect, 13, Railway Approach, London Bridge, S.E. :—

H. J. Williams	£5,487	Spencer & Co.	£5,100
Todd	5,349	Edwards & Medway*	4,983
Burman & Sons	5,190	* Accepted.	
Sparks & Son	5,125		

LONDON.—For alterations, &c., to 155, Hampstead-road, for Mr. D. Evans. Mr. J. B. Pinchbeck, architect :—

Hebblethwaite	£1,105	H. G. Davenall, South-ampton Wks., Gospel Oak*	£915
Titmas	1,075		
		* Accepted.	

LONDON.—For alterations at 151 and 153, Curtain-road, E., for Messrs. William Wallace & Co. Mr. J. R. Manning, architect, Milkwood Estate Office, Herne Hill, S.E. :—

Biggs	£575 10	Holliday & Greenwood	£439 0
Wake & Dean	485 0	Higgs	435 0
Rodwell	473 0	Sims & Wood	353 18

LONDON.—For exterior painting of Townsend-street School, for the School Board of London. Mr. T. J. Bailey, Architect :—

Williams	£230 0	Garrett & Son	£179 0
Downs	229 0	Rice	177 0
Leek & Hooker	221 0	Charteris	169 0
Chalkley	195 0	Patrick	164 0
Johnson	194 0	Marchant & Hirst	139 10

LONDON.—For exterior painting of Station-road School, for the School Board for London. Mr. T. J. Bailey, Architect :—

Allan & Son	£223 0	Ballard	£102 12
Britton	218 0	Taylor & Son	101 10
Gough	114 0	Stevens Bros.	89 15
Houghton & Son	112 0	Marchant & Hirst	89 10
Lidstone	108 0		

LONDON.—For altering and covering with lead the timber spire of St. Philip's Church, Dalston. Mr. H. McLachlan, architect, 29, Furnival-street, London, E.C. :—

J. V. Oliver	£430	Barrett & Power	£365
Dove Bros.	385	John Anley, Dalston*	346
		* Accepted with slight modifications.	

LONDON.—Accepted for laying down about 14,000 yds of wood pavement, for the Vestry of St. George, Hanover-square. Mr. G. Livingstone, Surveyor, 1, Pimlico-road, London, S.W. :—

Improved Wood Pavement Co., 46, Queen Victoria-street, E.C.

For paving streets at present laid with granite pitching—6-in. blocks, 8s. ; 5-in. blocks, 7s. 6d. per square yard.

For paving streets at present macadamised—6-in. blocks, 9s. 3d. ; 5-in. blocks, 8s. 6d. per square yard.

LONDON.—For the execution of drainage works, New North-road and Shaftesbury-street, Hoxton, for the Vestry of St. Leonard, Shoreditch. Mr. A. Jackson Martin, Surveyor, Town Hall, Old-street, London, E.C. :—

T. Adams	£1,259	John Jackson, Plaistow, E.*	£1,117
D. H. Porter	1,149	C. W. Killingback†	997
		[Surveyor's estimate, £1,140.]	
		* Recommended for acceptance.	
		† Informal.	

LONDON.—For the construction of sewers, &c., East Barnet-road, for the Enfield Local Board. Mr. Wm. Ketteringham, Surveyor, Court House, Enfield :—

Pavey & Son	£749 17 6
W. Nichols	725 10 0
John Jackson & Sons, Enfield (accepted)	713 10 0

LONDON.—For the construction of underground convenience, Camberwell-green, for the Camberwell Vestry. Mr. O. S. Brown, surveyor, Works Department, Vestry-hall, Camberwell, London, S.E. :—

Doulton & Co.	£2,117	Finch & Co., Lambeth	£1,827
G. Jennings	1,850	*Accepted	

LONDON.—For taking out bulged portion of front and rebuilding same and doing repairs, painting, &c., at No. 88, Stanhope-street, St. Pancras, for Mr. Alfred B. Butt. Mr. William A. Burr, architect, 65, Chancery-lane, W.C. :—

Larke & Son	£184	Hocking (accepted)	£85
Stevens Bros.	88		

LONDON.—For the reconstruction of the police station at Walton-street, for the Receiver for the Metropolitan District. Mr. R. Norman Shaw, R.A., architect. Quantities by Messrs. Franklin & Andrews :—

Hart Bros.	£6,080	Ansell	£6,754
Downs	6,920	Lathey Bros.	6,647
Boyce	6,865	Higgs & Hill	6,530
Willmott	6,800	Grover	6,284
Lawrence & Son	6,795		

LONDON.—For the erection of business premises, Marchmont-street, for Mr. Thos. Willis. Mr. W. L. Spiers, architect :—

Matthew Bros.	£1,690	F. T. Chinchen, Kensal Green (accepted)	£1,495
G. E. Todd	1,665		

LONDON.—Accepted for reconstructing drainage, &c., at 7, 8, and 9, Upper St. Martin's-lane, for Messrs. Forder & Co., Ltd. :—

F. T. Chinchen £190 0 0

LONDON.—For distempering and cleansing, &c., to Poplar and Stepney Sick Asylum, Devons-road. Mr. G. E. Holman, architect and surveyor, 109, Bow-road, London :—

Tully	£1,760 0	Humphrey	£430 17
McCarthy	849 0	Lilley	430 0
T. White & Son	486 0	Derby	395
Silk & Son	447 0		

LONDON.—For repairs and reinstatements at Nos. 104, 106, 108 110, and 112, Hanbury-street, and Nos. 1, 2, and 3, Samuel's-court, Spitalfields. Mr. F. Child, surveyor, 65, Chancery-lane, W.C. :—

Belcher & Co.	£899	Wells & Son*	£875
Howlett & Son	878	E. Payne	860
		*Accepted.	

LONDON.—For exterior painting at the Saunders-road Schools for the School Board for London :—

W. R. & A. Hide	£167 15	Yerbury & Son	£105 0
Peattie & Axtell	135 0	S. Polden	86 6
Sealey	130 10	F. T. Chinchen*	80 0
Williams & Son	115 0	* Accepted.	

LONDON.—For alterations and decorations to the "Artichoke" tavern, Church-street, Camberwell, for Mr. Callingham. Mr. Ernest R. Barrow, architect, 7, John-street, Adelphi, London, W.C. :—

Turtle & Appleton	£686 0	Drew & Cadman	£504 0
Bush & Sons	628 0	Horton (accepted)	585 12

LONDON.—For the erection of shop, house, and studio at No. 40, Walworth-road, for Mr. Fred. Viner. Mr. Edward Crosse, architect :—

J. Almond	£1,337	A. White & Co.	£1,275
J. Bullers	1,320	Tyerman	1,127
Turtle & Appleton	1,225	Wm. Smith	1,097
H. & H. F. Higgs	1,218	P. Wood	965
Canning & Mullins	1,206		

MANSFIELD (Notts.).—For arching over a portion of the river Maun, Rock Valley. Mr. R. Frank Vallance, Borough Surveyor, Mansfield :—

J. D. Tomlinson	£249 4 3	W. A. Vallance	£195 0 0
J. W. Fisher	214 0 0	G. Frisby	178 0 0
J. F. Price	446 15 0	H. Baker	160 0 0
H. Vickers	312 0 0	H. Alsop, Mansfield*	149 0 0
J. H. Vickers	297 5 0	* Accepted.	

MARYPORT (Cumberland).—Accepted for the erection of five dwelling-houses, for the Co-operative Industrial Society, Limited. Mr. C. Baglesfield, architect, Maryport :—

Dickson & Nicholson, Netherton £1,086 2 0

MARYPORT.—For rebuilding six cottages, Nelson-street, Maryport, for Mr. J. A. Anderson :—

Mason work.—Whillans & Sons	£451 13 0
Joiner work.—J. Kendal	
Slater work.—T. Mandle	
Plasterers.—Hewetson & Southwell	
Plumber.—J. Graham	
Painter and Glazier.—J. Wilson	

[All of Maryport.]

NEWCASTLE-ON-TYNE.—For the erection of police-station, Scotswood-road, for the Corporation. Messrs. Marshall & Dick, architects, 4, Northumberland-street, Newcastle-on-Tyne. Quantities by the architects :—

C. W. King	£5,600 0 0	Jos. Elliott	£4,586 0 0
G. H. Mauchlen	5,141 17 0	Thos. Weatheritt	4,516 6 10
H. Brown & Co.	5,111 0 0	Alex. Bruce	4,514 0 0
J. & W. Lowry	5,079 0 0	Jas. Lunn, 8, Snow-don-street, Newcastle*	4,400 4 8
J. C. Hope	4,835 15 6		
Middlemiss Bros.	4,777 0 0		

[Architect's estimate, £4,800.]

* Recommended for acceptance.

NEWCASTLE-ON-TYNE. — For the extension of works, Elswick-place, for Messrs. Jno. Dunn & Son. Mr. Edwin Bowman, architect, 62, Grainger-street, Newcastle-on-Tyne. Quantities by the architect :—

H. Brown & Co.	£3,544 0 0	A. Pringle	£3,235 0 0
J. & W. Lowry	3,475 0 0	G. Scott & Son	3,200 0 0
T. & J. White	3,360 12 7	T. H. Forsyth, Newcastle*	3,189 3 0
Middlemiss Bros.	3,293 0 0	E. & T. George	3,117 18 8
W. C. Tyrie	3,291 13 0	J. Lunn	3,100 0 0
Kirk & Brown	3,288 0 0	A. Bruce	3,069 0 10
T. Weatheritt	3,285 14 4	T. Hunter	3,037 10 6
J. Ellictt	3,250 0 0	T. Hutchinson	2,942 0 0
J. C. Hope	3,244 0 0	* Accepted.	

PONTYPOOL.—For the erection of club buildings, for the Constitutional Club Company, Limited :—

John Morgan	£1,930 0	Hatherly & Carr	£1,487 0
A. H. Bailey	1,698 0	Wm. Lessaman, jun.	1,430 0
Morgan & Evans	1,627 0	J. Monks & Co., Newport, Mon.*	1,394 0
Wm. Bowers & Co.	1,597 15	* Accepted.	
Wm. Jones & Son	1,547 0		

SOUTHEND-ON-SEA.—For heating with hot water, Institute &c., Clarence-road, for the Corporation. Mr. W. Y. Hobbiss, architect, Clarence-road, Southend-on-Sea :—

W. Christmas	£527 9	Kennell & Co.	£275 0
Crittall & Co.	375 0	Woodhams & Coombes, Southend-on-Sea*	231 0
Beckett & Co.	349 10	W. J. Fox	219 15
W. G. Cannon	345 10	Jones & Son	169 0
J. Gray	335 0	Bacon & Co.	143 0
Strode & Co.	327 0	* Accepted.	
J. C. & J. S. Ellis	305 0		

SOUTHEND-ON-SEA.—For technical school, Clarence-road, for the Corporation. Mr. W. Y. Hobbiss, architect, Clarence-road, Southend-on-Sea :—

T. B. Pitcher	£3,355 11 8	C. J. Slade	£2,426 0 0
Belham & Co.	2,796 10 4	Baker & Wiseman	2,163 0 0
H. R. Rons	2,600 0 0	F. E. Woodhams, Southend-on-Sea*	2,159 0 0
C. E. Skinner	2,505 10 0	* Accepted.	
T. Dupont	2,468 0 0		

STOCKTON-ON-TEES. — For erecting the Mill-lane Infant Schools. Messrs. Weatherill & Whipham, architects, Stockton-on-Tees :—

Dickinson	£4,303 0 0	Atkinson	£3,805 8 4
Perks & Son	4,084 0 0	Johnson & Hanby	3,755 3 0
Davison	4,048 7 11	Cooke*	3,587 4 8
Craggs & Benson	4,035 10 0	* Accepted.	

SUTTON COLDFIELD.—For the erection of church house, &c., for the Committee. Mr. W. J. Langley, architect. Quantities by Mr. Anthony Rowse, 28, Bennett's Hill, Birmingham :—

J. Simons	£2,200	W. & J. Webb	£1,980
G. Gill	2,050	J. Thrivilles & Son, Sutton Coldfield*	1,950
R. Fenwick	1,999	Gowing & Ingram	1,907
W. Hopkins	1,995		
		* Accepted subject to modifications.	

WAKEFIELD.—Accepted for the execution of drainage works Alverthorpe, Stanley, &c., for the Union Rural Sanitary authority. Mr. Frank Massie, C.E., Tetly House, Kirkgate, Wakefield. Quantities by engineer:—

Stanley Drainage, Contract No. 7.

Garforth Bros., Mirfield.....£1,696 13 2

Stanley Drainage, Contract No. 8.

Garforth Bros., Mirfield £997 5 3

Joint Drainage, Contract No. 1.

Garforth Bros., Mirfield.....£1,698 5 3

Shitlington Drainage, Contract No. 4.

Simon Johnson, Manchester £3,822 12 4

WALTHAMSTOW.—For the supply of furniture and fittings to the new Public Library, for the Library Authority at High-street, Walthamstow. Mr. J. Williams Dunford, architect, 100C, Queen Victoria-street, E.C.:—

McMillan & Houghton	£772 0 0	Godson & Son.....	563 0 0
Howlett.....	745 0 0	Shoolbred.....	548 3 6
Atkinson & Co.....	705 0 0	Cohen.....	542 10 0
Hammer & Co.	700 0 0	Educational Supply Association	529 0 0
Syer & Co.....	694 0 0	Taylor & Co.....	525 0 0
Smee & Cobay	679 18 0	Rons	523 0 0
Barrett & Power	654 25 0	Wake & Dean, Southwark*	510 0 0
Powditch	638 0 0		
Spencer.....	631 10 0		
Roberts	595 3 9		

* Accepted subject to the approval of the Local Board.

WEST CORNFORTH (Durham).—For the erection of class-rooms, cloak-rooms, &c., at the schools, for the School Board. Mr. H. T. Gradon, architect, Market-place, Durham:—

Wm. Grainger	£1,186 4 0	Geo. Lazenby....	£1,003 12 10½
Dobbin & Isetar..	1,073 0 0	T.Sanderson, Cox-hoe (accepted.)	1,003 3 8
Bell & Mann.....	1,042 0 0		
Draper & Sons ..	1,030 14 0		

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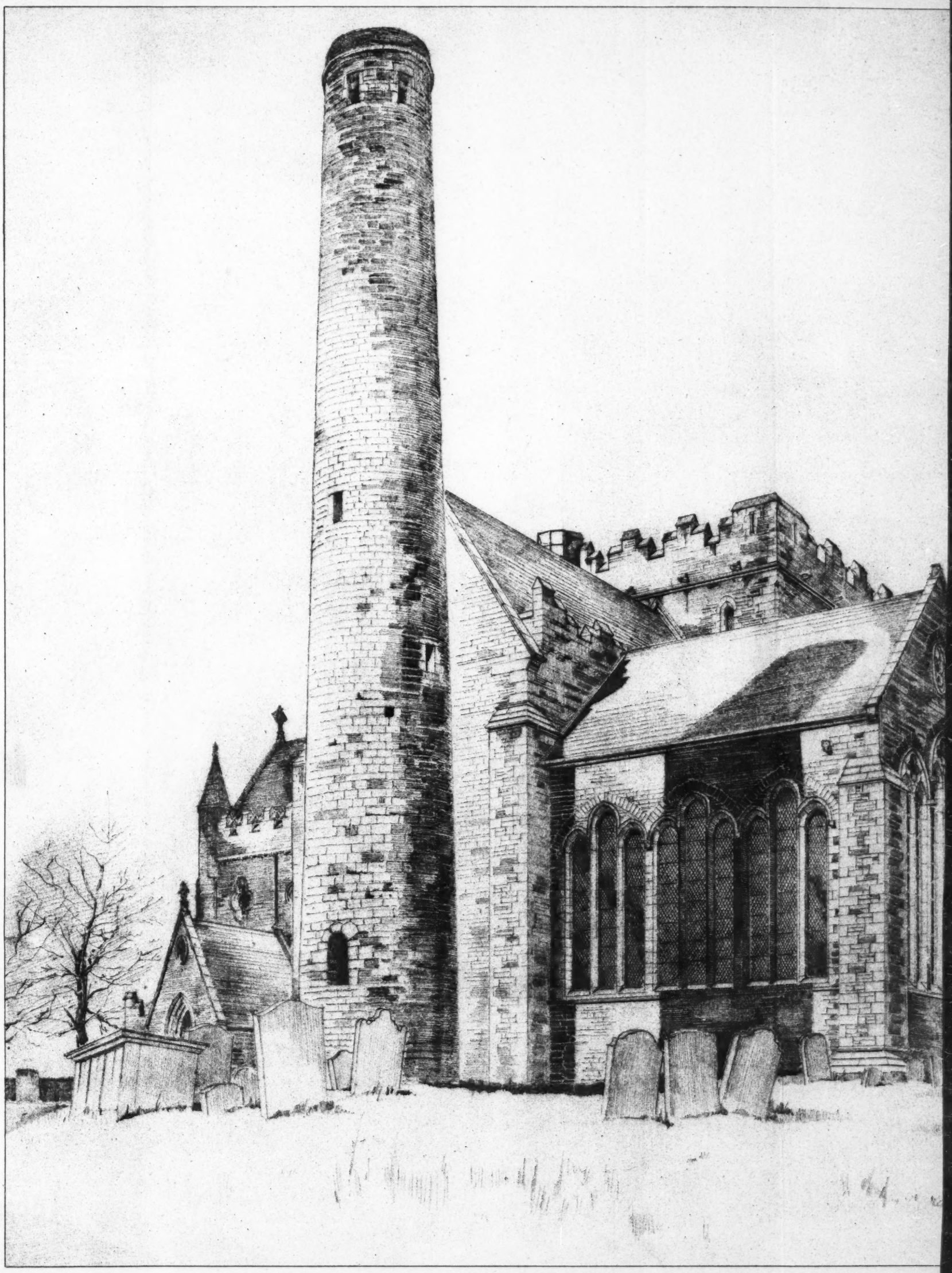

ANCIENT CATHEDRALS OF IRELAND.—Drawn by Mr.

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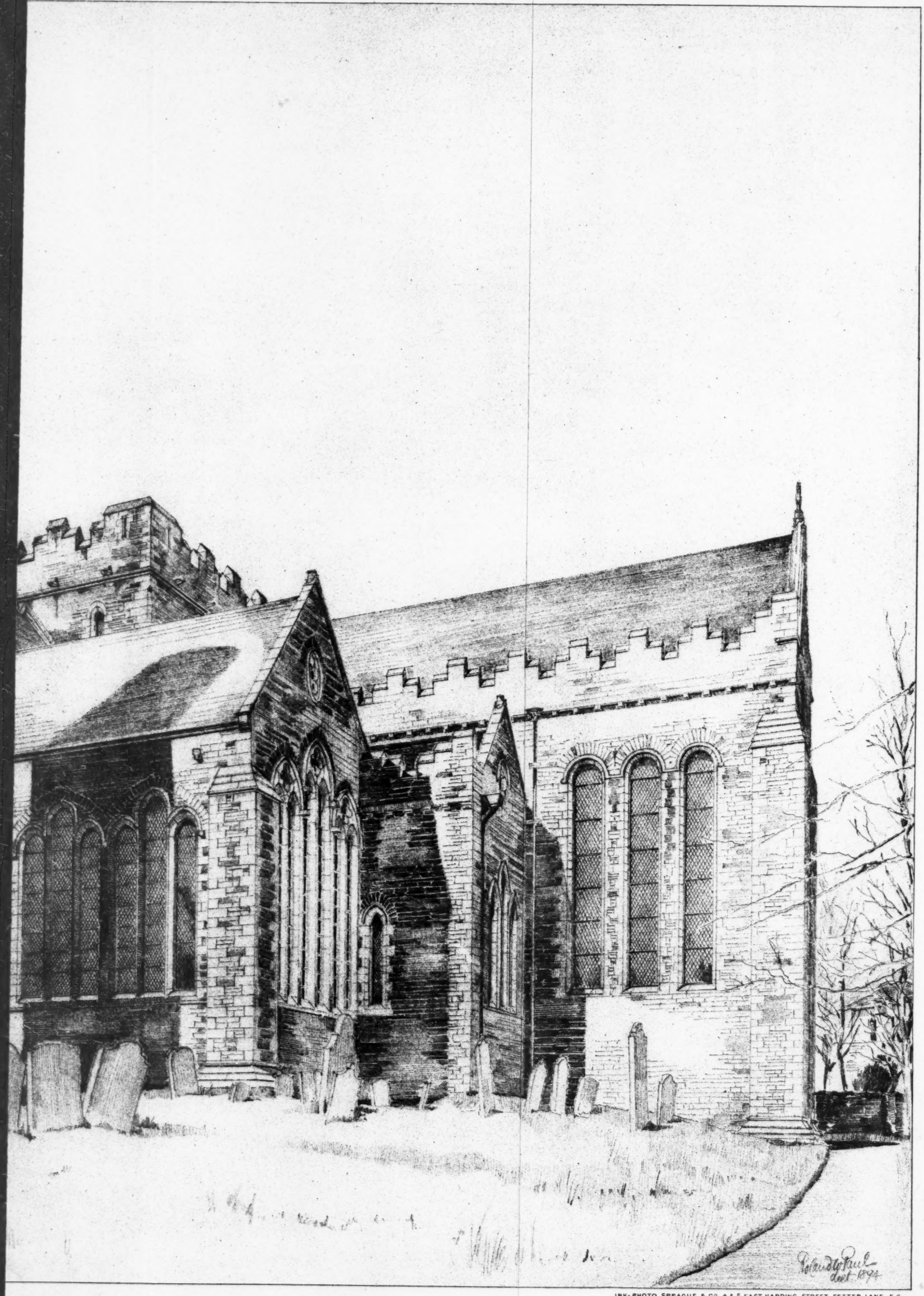

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RALS OF IRELAND.—Drawn by Mr. Roland W. Paul.

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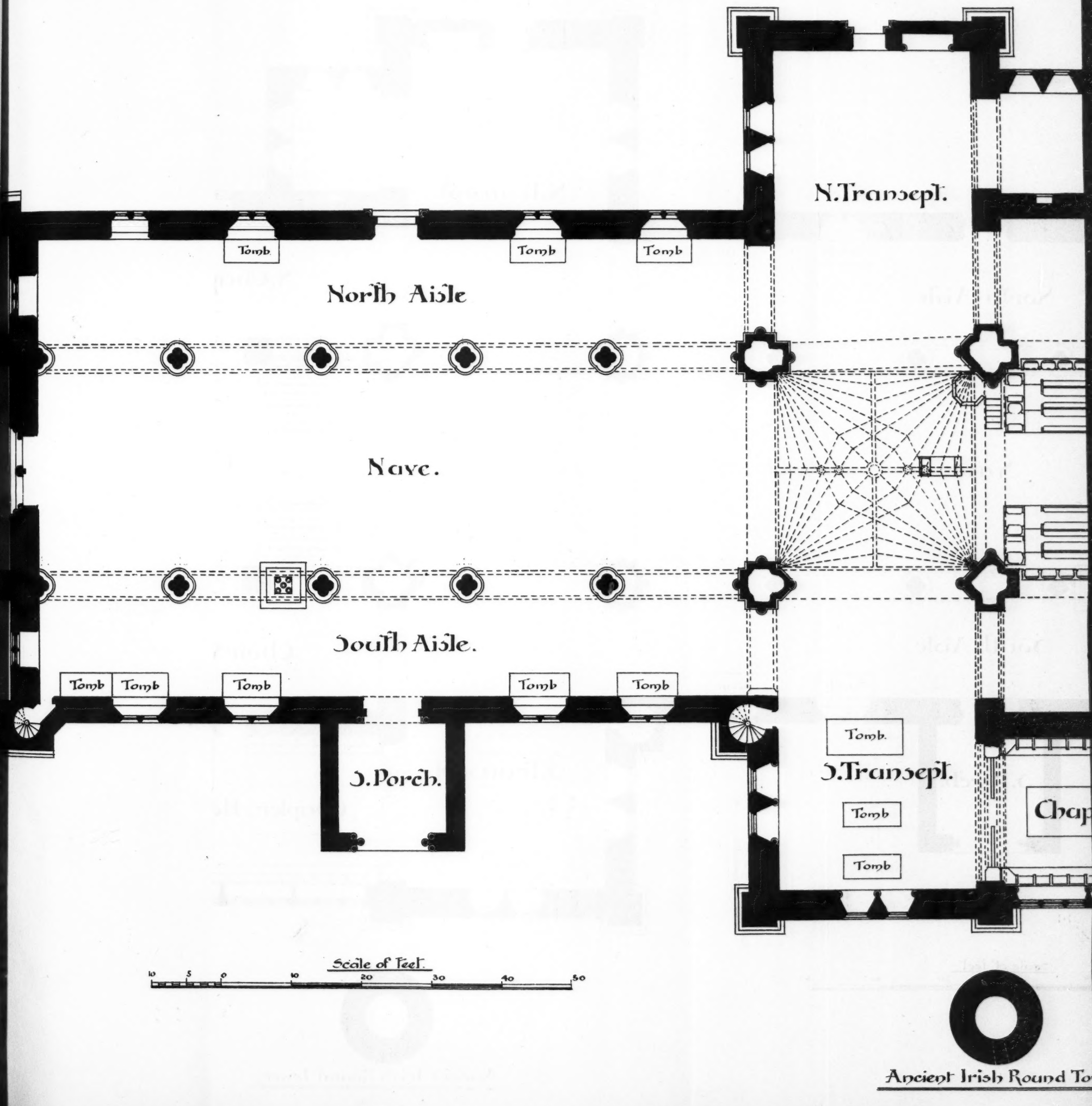
Cathedral of St. Canice, Kilkenny.



Ancient Irish Round To

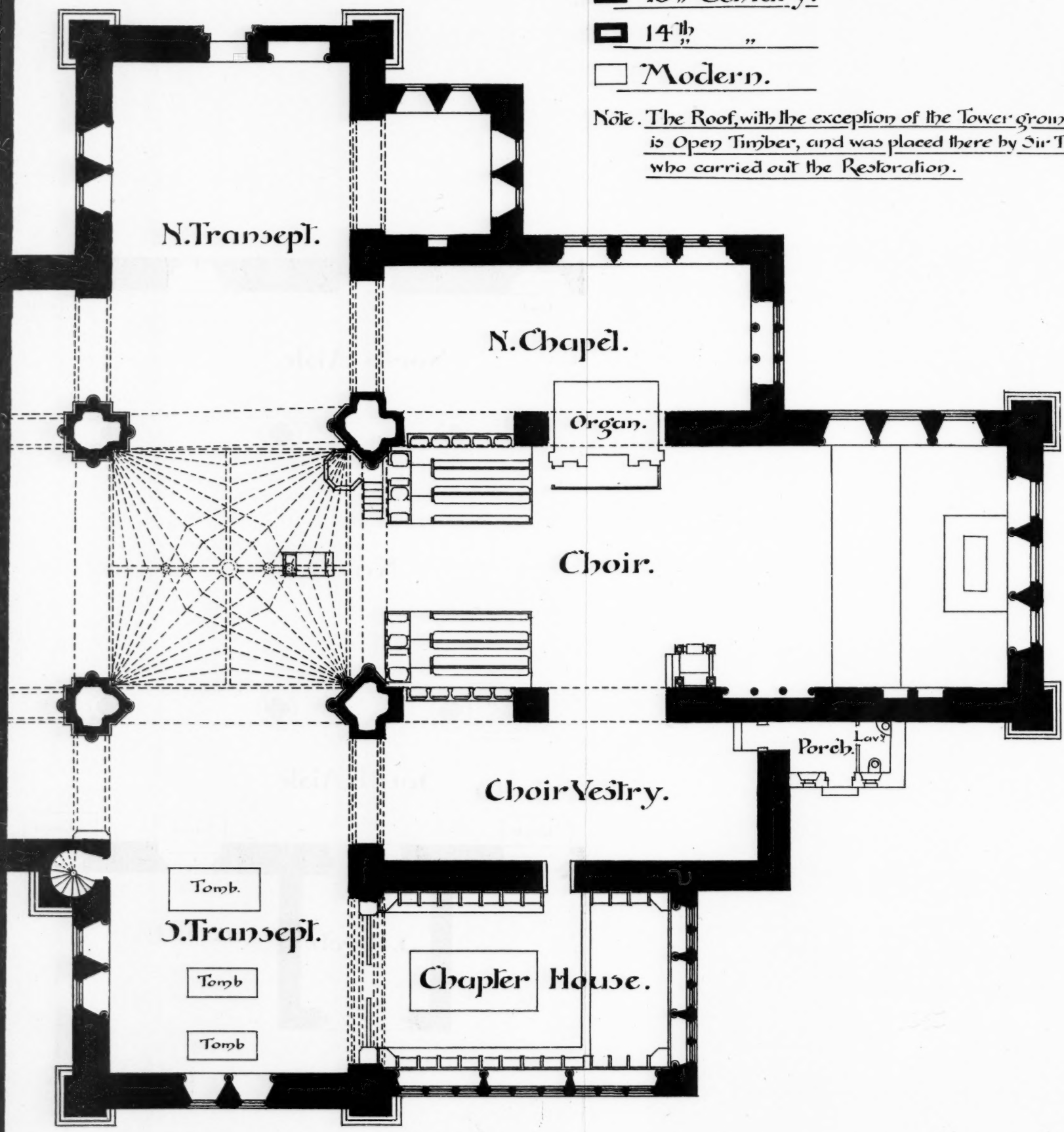
Dates.

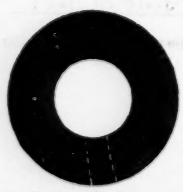
13th Century.

14th „

Modern.

Note. The Roof, with the exception of the Tower grouping, is Open Timber, and was placed there by Sir Thos N. Deane who carried out the Restoration.





Ancient Irish Round Tower.

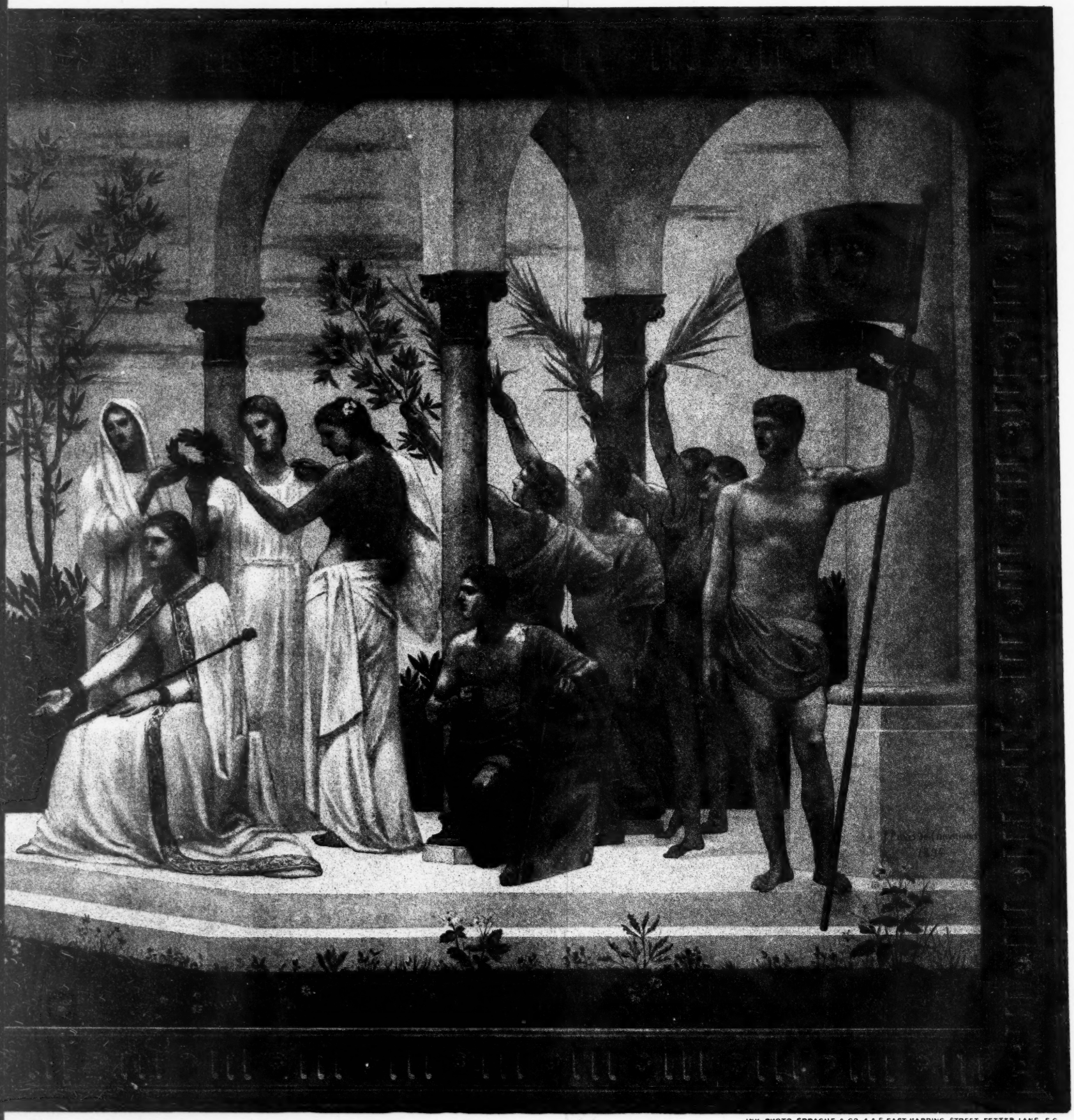
J. C. Hériot. delt.

PHOTO-LITHO. SPRAGUE & Co. 4 & 5 EAST HARDING STREET FETTER LANE. E.C.

DECORATIVE PAINTING: "VICTOR HUGO OFFRANT SA LYRE À LA VILLE DE PARIS."—By M. Pu

(FOR A STAIRCASE IN THE HOTEL DE VILLE, PARIS.)

Salon of the Champ de Mars, 1894.



INK-PHOTO. SPRAGUE & Co 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

GO OFFRANT SA LYRE À LA VILLE DE PARIS."—By M. Puvis de Chavannes.
A STAIRCASE IN THE HOTEL DE VILLE, PARIS.)

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DECORATIVE PAINTING: "TRIOMPHE DE L'ART."—By M. Bonnat.
(for a ceiling in the hôtel de ville, paris.)

Salon of the Champs Elysées, 1894.